The OIL WEEKLY

15c

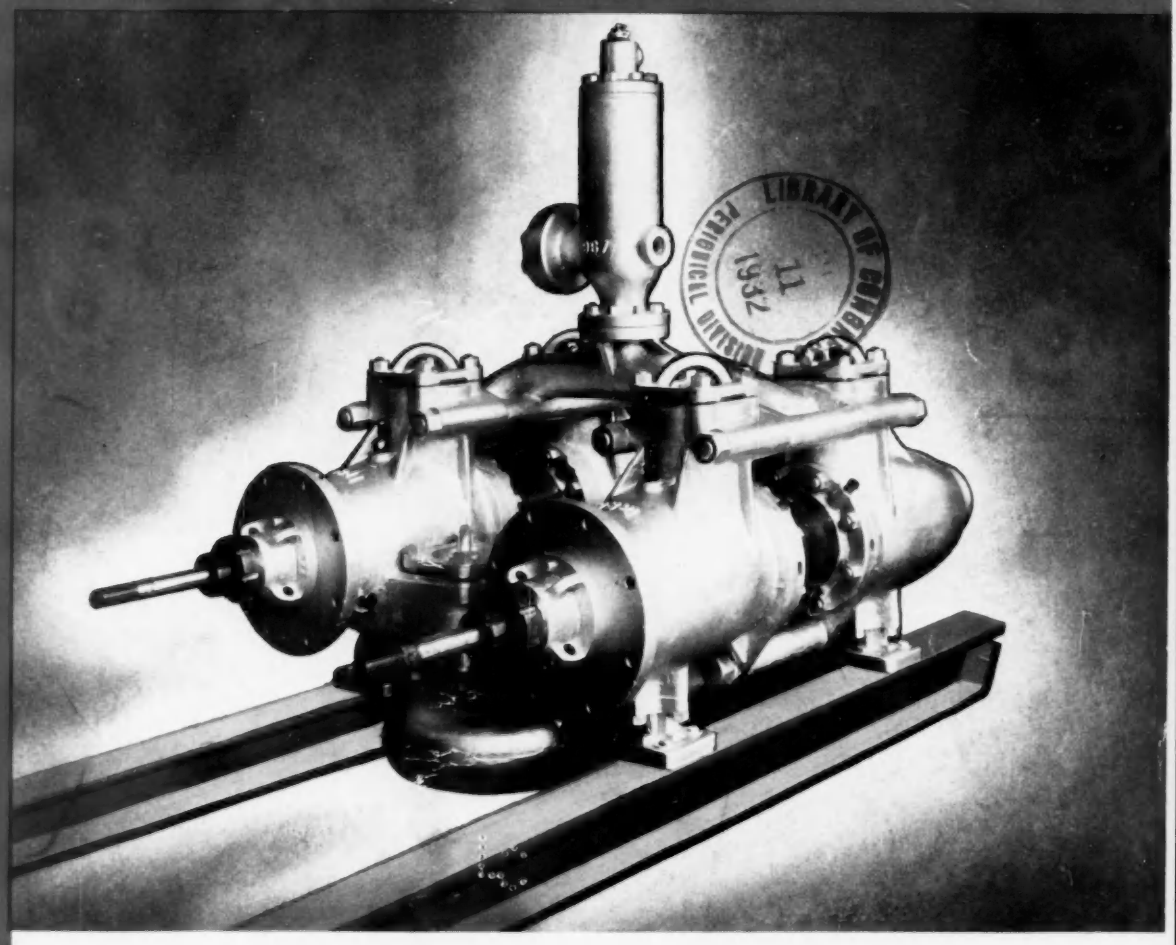
OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

JUNE 20, 1932
olume 66 Number 1

LIBRARY OF PETROLEUM INDUSTRY 11 1932



ANNOUNCING

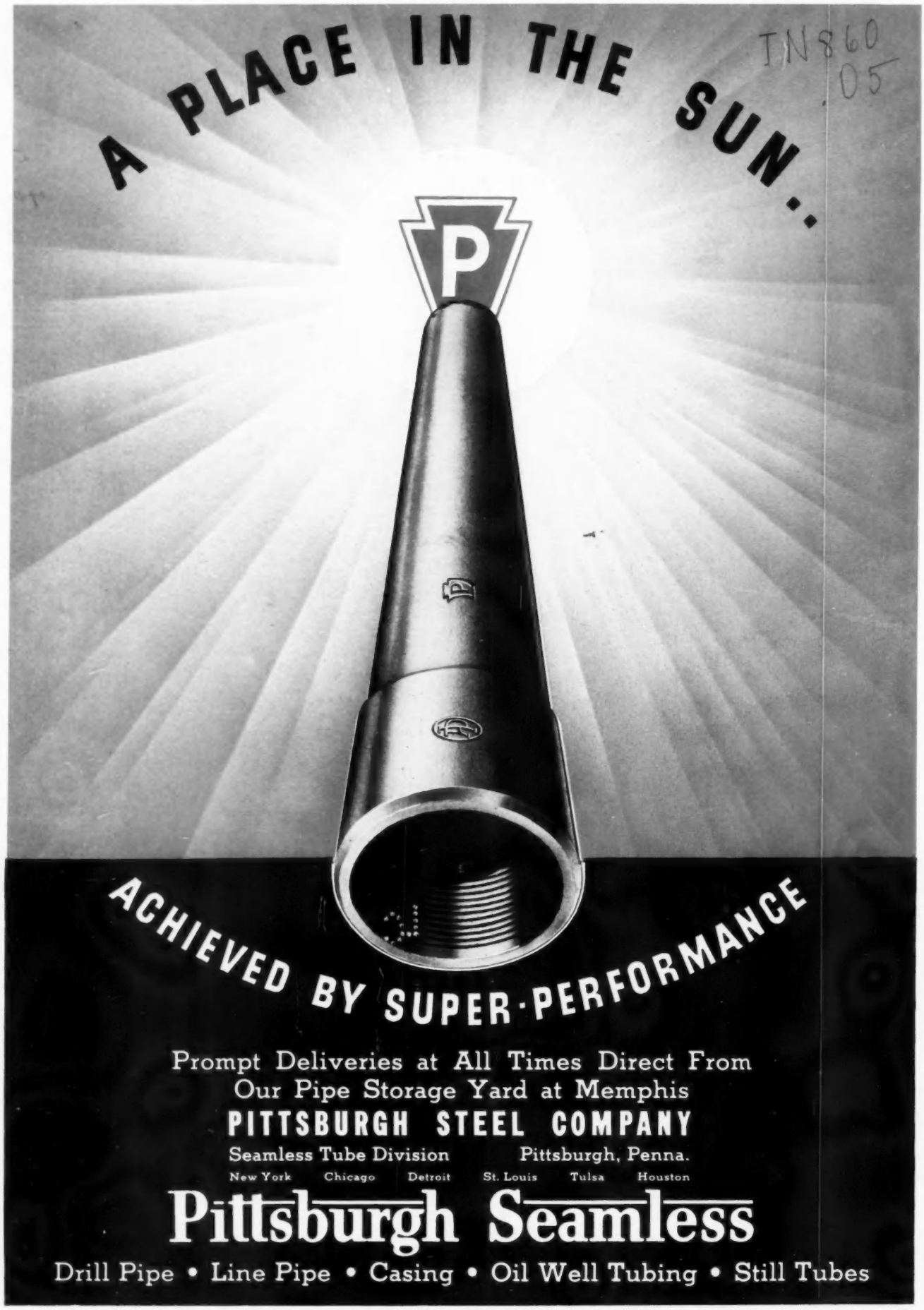
THE FLUID-PISTON SLUSH PUMP

An entirely new design in which plungers and rods are completely sealed against contact with abrasive-laden mud fluid. Eliminates replacements of pistons, liners and rods, assuring greatly reduced operating costs and shut-down periods.

In the new FLUID-PISTON pump here illustrated, no abrasive-laden mud touches reciprocating members, consequently abrasion on these parts is entirely eliminated. No pump liners are used. There are no packing adjustments. Friction of moving parts has been reduced to a minimum. Theer can be no slippage of mud past the FLUID-PISTON hence pump efficiency remains constant at new pump value. Valve seats may be replaced by hand, without the use of a seat puller. The pump is built of chrome nickel steel of sectionalized construction, and to extremely precise limits. Complete engineering information in bulletin form will be furnished on request.

Abercrombie Pump Company

HOUSTON, TEXAS



Prompt Deliveries at All Times Direct From
Our Pipe Storage Yard at Memphis

PITTSBURGH STEEL COMPANY

Seamless Tube Division Pittsburgh, Penna.

New York Chicago Detroit St. Louis Tulsa Houston

Pittsburgh Seamless

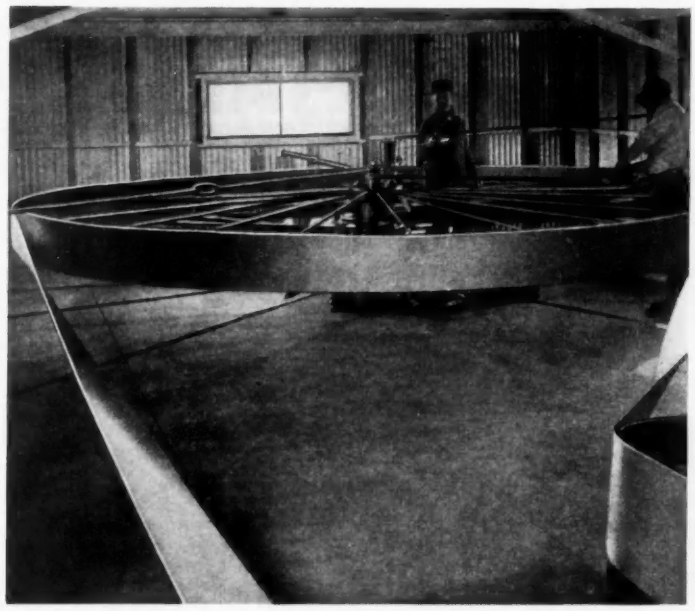
Drill Pipe • Line Pipe • Casing • Oil Well Tubing • Still Tubes

IN860 .05

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Where the Pumping Power Carries Heaviest Loads

Use SUPER EXCELO TRANSMISSION BELTING



ONLY a mighty tough belt can face a pumping job where heaviest loads must be carried. It will be stressed and strained in every fibre of its structure. It must have the least stretch so as to minimize resplicing and yet all the necessary resilience to resist shocks. It must flex perfectly over the pulleys. It must stay on the job week after week, standing up against the most grilling tugs and jolts.

Super Excelo meets those requirements—and then some. Its exceptionally high tensile strength is adequate for overloads and its rugged construction stands the hardest external and internal punishment.

Republic developed this fine product out of 25 years of oil well service experience and the closest study of actual conditions as they exist today.

QUALITY–*Through and Through*

The very best close woven silver duck is found in Super Excelo. The finest friction compound is used for the skim and to impregnate all fabric plies. The powerful adhesion between those plies won't give under hardest usage.

Super Excelo is quality through and through—and always uniform. It has been made for a particularly hard job at which it performs regularly, satisfactorily and above all—economically.

Built with a friction surface. Furnished with folded or square edge as desired. Made endless when so requested.

Branded with the A.P.I. Symbol and made to specifications that exceed A.P.I. requirements

The Republic Rubber Co.

Youngstown, Ohio

Mid-Continent Distributors:

FRICK-REID SUPPLY CORPORATION
TULSA, OKLA.

THE BOVAIRD SUPPLY COMPANY
TULSA, OKLA.

WHEN THE EMERGENCY CALL COMES

IN THE pipe-line division yards, there's work to keep this "Caterpillar" Tractor constantly busy—unloading pipe, transporting it, piling, loading.

And when the emergency call comes, the tractor is quickly loaded on a high-speed trailer, hastened to the place of need. There, on its own sure-treading tracks, it lends—through drawbar or winch—ready power for numerous service tasks.

The same dependable power that makes "Caterpillar" Tractors first choice on pipe-line construction, recommends their use for maintenance and emergency calls.

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

Track-type Tractors Combines Road Machinery

(There's a "Caterpillar" Dealer Near You)

Prices—f. o. b. Peoria, Illinois

FIFTEEN	$1100	THIRTY-FIVE	$2400
TWENTY	$1450	FIFTY	$3675
TWENTY-FIVE	$1900	SIXTY-FIVE	$4350
DIESEL	$6500		

CATERPILLAR

REG. U. S. PAT. OFF.

TRACTOR

THE OIL WEEKLY

June 20, 1932
Vol. 66, No. 1

COPYRIGHT, 1932

Published Weekly by
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

S. W. ROBINSON
Editor

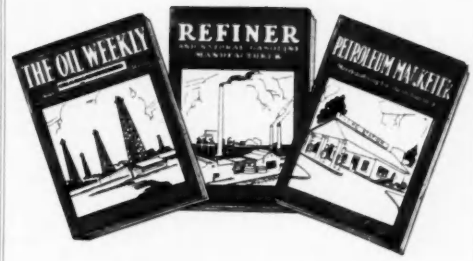
CONTENTS

Special Features

California Price Raise Depends Upon Holding to Allowable... 9
Emergency Orders to Govern Pending Hearing on Conroe Field 10
Tax Bill Amendment Would Make Petroleum Levies Retroactive 10
These Times . . . And Loyalty (An Editorial) 11
Benefits of Curtailment Shown in Bureau Report of April Results 12
H. J. Struth
Interstate Compact Law Gets House Judiciary Committee Approval 14
Study Property Valuation and Repressure of Stripper Wells... 15
Montgomery Has Every Promise of Important Production.... 17
Wm. V. Gross
Geology and Characteristics of the Wilcox Sand at Oklahoma City 24
D. R. Knowlton, H. C. Charles and D. A. McGee
Surface and Subsurface Equipment Loads of Bandwheel Powers 30
K. B. Nowels
Field Hints from Here and There..... 37

Regular Departments

Advertiser's Index 62
The Changing Panorama 7
World Petroleum in Review 18
Markets-Production-Crude Prices 19
United States Production Estimates..... 19
Crude Oil Price Quotations 22
California Fields 38
Oklahoma Fields 40
Kansas Fields 42
East Central Texas 44
North and West Texas.....49
South Texas 50
Gulf Coastal Fields 52
New Mexico and Rocky Mountain..... 56
Louisiana Fields 55
Arkansas Fields 58
Southeastern States 57
Eastern States 58
New Equipment Bulletins, Books 59
Squeaks from the Bull Wheel..... 61



SPECIALIZED OIL JOURNALS

Published by

THE GULF PUBLISHING COMPANY

R. L. DUDLEY, *President*
A. L. BURNS, *Gen'l Manager*
S. W. ROBINSON, *Editorial Director*
J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 323, 250 Park Avenue, Dick Swinsky, Manager.

PITTSBURGH: 1407 Park Building, W. W. Pigue, Manager.

CHICAGO: Room 1235, 141 W. Jackson Blvd. O. R. Waller, Manager.

LOS ANGELES: 416 Haas Building, W. E. Green, Manager.

TULSA: 913-916 Hunt Building, J. F. Carter, Jr., Manager.

FORT WORTH: 203 W. T. Waggoner Building, H. H. King, Manager.

Issued Monday of each week. Single copies 15 cents. Subscription price: Domestic $1.00 a year, Foreign $1.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.

MADE ESPECIALLY FOR DEEP WELLS

. . . therefore better for all depth wells

THE LATEST GUIBERSON DUPLEX CATCHER

Master the greatest difficulties and the lesser ones will be more than taken care of. The Latest Guiberson Duplex Catcher has six slips, actuated by a common means. These slips cover 360° of the casing, bearing greater weight without distortion to casing and catching the longest, heaviest strings of tubing within three inches. Strong spring operates without the need of fluid in the hole. Heavy striker weight overcomes the retarding action of mud or paraffin. Increased tubing protection is provided for all depth wells. *Fully patented.*

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION

Box 1106, Dallas, Texas

California Branch: 1304 Security Title Ins. Bldg., Los Angeles

504 Wright Bldg., Tulsa

First and Locust Sts., Newark, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

JUN 20 1932

VOLUME 66, No. 1 June 20, 1932

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

It may be justice, but the amendment Congress proposes to the revenue bill which will make the original law retroactive as regards gasoline and lubricating oil hardly can be expected to more than cause expensive litigation to be terminated in refunding. Stocks of oil in the hands of those other than producers which the original bill provides shall pay the tax, assume proportions which are a grave temptation to the collectors. But to make the taxes as uniform as constitutional guarantees tend to require, any assessment against others than producers of gasoline would extend to stocks in filling station tanks, if not to automobile tanks on the road. No doubt there have been some manipulations to get as much gasoline as possible out of the tax zone, but such is to be expected. Every special tax has its loop holes, and every one invites "sharp practice" in which tax payers have had a lot of experience in recent years. The oil industry as a majority has been fighting gasoline tax evasion as an organized unit. And now that it has opportunity for a little honest tax evasion, its hand is called, but there is enough in the pot that the courts will probably determine the hands. Page 10.

Could Be Worse

Considering the several influences, all adverse, the oil industry has little to complain about. Unfortunately, a picture that can be accepted as fairly accurate in detail must come through government sources which makes the data several weeks old. The latest details are to the end of April, and so far as intervening weeks are concerned, it is only known that things now, statistically, are better than they were then, despite the gloom of the recent A. P. I. session. Consumption is running lower and imports have been higher to get in ahead of the tariff, but prices are enough better that there are possibilities of profit for the year if things can be kept as they are—and there is always hope for improvement. Page 12.

BERKHOEPEN OIL FIELD, GERMANY

This picture was taken in April, shortly after the well was completed, making 800 barrels daily from 3000 feet

Bandwheel Powers

Pumping a group of wells from a central power probably originated in the inventive mind of an operator who had more wells than engines or money to buy them. The economy is obvious. But the mere hooking up of a number of shallow wells to a bandwheel power does not incorporate all of the economy that can be obtained by careful study of the problem involved. Arranging the wells to pull against each other first was practiced probably because the limit of power required the conservation possible from hit-or-miss methods. Late scientific study has revealed methods of securing balance on powers so near exact that the saving in fuel used by the engine or motor pulling the power is a power itself on the balance at the bank. Page 30.

Omens point that the new Beach or Conroe field in Montgomery County will be an important producing area. Reports from the few wells completed are sufficiently indicative to justify some deals involving important money, and the Texas Railroad Commission is not proposing to be caught napping without rules to regulate the field. But most potent omen of all is that the rangers have swooped down on Conroe to arrest a few beer peddlers. Rangers to control the lawless element have been a guarantee of prolific production in Texas ever since Orange called for assistance over 10 years ago.

The Oil Man's Calendar

JUNE

17 *Ninth Annual Meeting West Virginia Oil Marketer's Association, Charleston, West Virginia. Charleston, West Virginia. Daniel Boone Hotel.*

20-24 *American Society for Testing Materials, Committee D-2, on Petroleum Products and Lubricants, Atlantic City, New Jersey.*

20-24 *Oil Company Credit Managers at Annual Meeting of National Association of Credit Men, Detroit, Michigan.*

24 *Pennsylvania Grade Crude Oil Association, Bradford, Pennsylvania.*

27-30 *American Society of Mechanical Engineers, Bigwin, Canada.*

AUGUST

22-26 *American Chemical Society, Denver, Colorado.*

23-26 *Pacific Coast Gas Association, Spokane, Washington.*

SEPTEMBER

10-17 *Society of Automotive Engineers, Cleveland, Ohio.*

14-16 *National Petroleum Association, Atlantic City, New Jersey.*

30

OCTOBER

1 *American Institute of Mining and Metallurgical Engineers, Petroleum Division, Dallas, Texas.*

3- 7 *National Safety Council, Washington, D. C.*

4- 6 *Society of Automotive Engineers, Transportation meeting, Toronto, Canada.*

10-14 *American Gas Association, Atlantic City, N. J.*

NOVEMBER

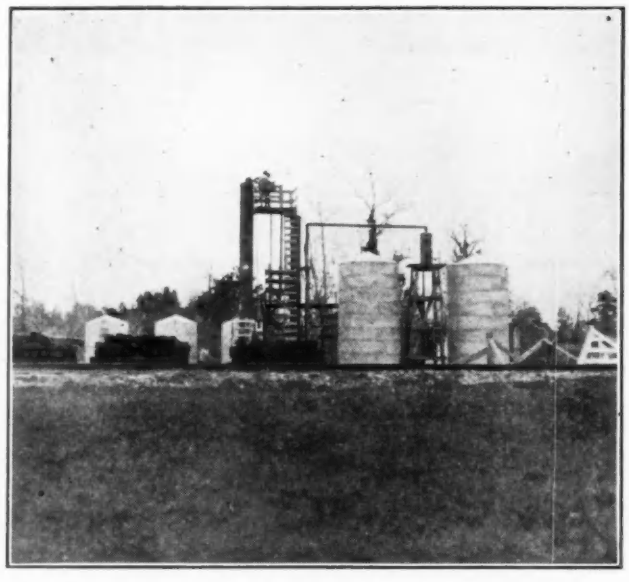
15-17 *American Petroleum Institute, Houston, Texas.*

DECEMBER

? *Rocky Mountain Oil and Gas Association, Great Falls, Montana.*

5- 9 *American Society of Mechanical Engineers, New York.*

Something New in Refineries



Before the second well was drilled in the new Montgomery County, Texas, area, this refinery was ready to operate. The plant is not elaborate but its product gets patriotic local exception. A feature of equipment is that the tanks are corrugated galvanized iron, such as are usually associated with wind mills.

Inauguration of the five-day week by such an important industrial unit as Standard Oil Company of New Jersey and its subsidiaries is a big step toward what many observers believe is a correction of the excess of workers which the depression has made apparent. That the oil industry should set an example for other business seems so logical that it is to be hoped that other units may follow, and impress those in other lines with the desirability of this arrangement. The point is that the oil industry is a big benefactor from people having leisure (even with curtailed incomes) because the longer week-end invites the use of automobiles with its resultant consumption of gasoline and oil.

What of Oklahoma City?

Oklahoma City has had its troubles extending from high pressure wild wells, fires, damage suits, proration, the Oklahoma army and on up to Alfalfa Bill Murray, and still there is vision of ultimate big profit to the operators there. This comforting conclusion is reached through an interesting analysis of sand and production conditions in the field. Page 24.

California Price *Raise Depends Upon Holding to* Allowable

LOS ANGELES, June 13.

STANDARD Oil Company of California, will increase crude oil in California 25 cents per barrel, if and when production in that state is brought down to and maintained at 476,700 barrels per day. This offer, made in a telegram from K. R. Kingsbury, president of Standard Oil Company of California, to William M. Keck, chairman of the Executive Committee for the Equitable Curtailment of the Oil Industry in California, and was in reply to a resolution adopted by that body calling upon purchasers of crude in that state to increase prices 25 cents per barrel as a reward for efforts which have been made to bring production within limits of demand:

The telegram sent to the committee by Mr. Kingsbury follows:

"Referring to the resolutions adopted by your committee. You say that it is economically sound and for the public welfare that there should be no waste in the production of crude oil and that destructive elements are introduced into the industry when even for a short time material overproduction occurs. We concur in both propositions. We also agree that curtailment involves additional cost to the producer and we also agree that the producer should receive for his curtailed production as high a price as the markets with which California oil is in competition will permit.

"In November of last year the California Committee on Economics determined on basis of the best statistics then available that a production in this state of 456,700 barrels per day would equal consumption but this figure did not contemplate even a reasonable draft on the abnormal stocks carried in storage by the companies who are the principal purchasers of crude oil in this state. During the period from December 1, 1931, to June 1, 1932, the production in the state has averaged 505,302 barrels per day or 48,602 barrels per day in excess of the allowable production set. This excess production has been taken by the purchasing companies and added to an already overburdened storage. This figure of 456,700 barrels per day was approved by the statewide curtailment committee and set as the allowable production for California.

"Subsequent decline in demand has proven that figure too high. Since the failure of the Sharkey Act your committee has been dilligently at work to limit production to a figure which you have determined upon of 476,700 barrels per day allowable for the state, prorating this in definite amounts for each field in the state. In the meanwhile the Federal Oil Conservation Board's voluntary committee on economics has indicated a figure the equivalent of which is 442,000 barrels per day for California for the period June 1 to December 31, 1932. Figures for last week show a production in this state of 478,000 barrels per day, which is equivalent to 494,000 barrels per day had Ventura and other fields produced their full allowable under proration. From the best information available the production so far this week is running materially higher than this figure.

"Because we believe in conservation, and desire to afford your committee every opportunity for accomplishing its ends, and because the next few months cover the peak demand for petroleum products, we now announce that this company will increase the price at which it offers to purchase crude oil 25 cents per barrel on 27 gravity Signal Hill crude oil with a relative price for refinable crude oil of other gravities and for other fields throughout the state, provided a curtailment to the figure you have set of 476,700 barrels in the state is accomplished as quickly as possible, but not later than June 17, and that deficiencies in allowable production in a given field are not absorbed by excess production over allowables in other fields.

"The prices referred to will be offered 24 hours after the umpire certifies to us that these curtailment conditions have been met. These advanced prices will be withdrawn if the state's production for one week exceeds the

Briefly . . . The New Taxes

EXCISE taxes on petroleum products, parts of the measure by which Congress hopes to balance the budget of the United States, will take effect June 21. Imported oils as well as oils sold domestically are subject to the tax.

It is assumed, although regulations have not been made public, that merchandise in the hands of a distributor prior to June 21 will not be subject to the tax.

Briefly the provisions of the law are:

Import Duties—Crude petroleum one-half cent per gallon, fuel oil derived from petroleum, gas oil derived from petroleum, and all liquid derivatives of crude petroleum, except lubricating oil and gasoline or other motor fuel, one-half cent per gallon; gasoline or other motor fuel, 2½ cents per gallon; lubricating oil four cents per gallon; paraffin and other wax products one cent per pound. These taxes apply only to importations.

Lubricating Oil—The tax on domestic lubricating oil is four cents per gallon, to be paid by the producer. The act contemplates only one tax and regulations will provide for the sale of oils to compounders that the blender will pay the tax and the refiner will sell it tax free. This applies to domestic sales.

Gasoline—The tax of one cent per gallon shall be paid by the importer or the producer of gasoline, except that the tax shall not apply in the case of sales to a producer of gasoline. A producer is defined as "A compounder or blender and a dealer selling gasoline exclusively to producers of gasoline, as well as a producer."

allowable production indicated above, it being fully understood that this company holds itself free at all times to offer such prices for crude oil as, in its judgment, conditions in the industry warrant.

"May we call your attention now to the fact that before the seasonal peak demand is over a further material decrease in the allowable production is indicated and that this will have to be met by further corresponding curtailment, and may we also further call your attention to the fact that if the present rate of production continues, our company will materially reduce its purchases of crude oil.

"Please be assured of our appreciation of the efforts your committee is making and of our desire to cooperate toward bringing your committee work to a successful conclusion."

"Standard Oil Company of California
By K. R. Kingsbury, President."

Mr. Keck has addressed a letter to all operators, urging them to reduce production to the allowable. He said that this is the first time that the operators have had a definite promise of an increase, and that it will be folly to ignore it or expect others to carry the burden.

Emergency Order *to Govern Pending Hearing on* Conroe Field

Austin, Texas.—A hearing on the Conroe field, Montgomery County, to be held in Houston on June 25, was announced by the Texas Railroad Commission June 13, and at the same time emergency orders were issued which became effective on Wednesday, June 15. These emergency orders will be considered for permanent adoption at the hearing, and control of gas-oil ratios and probable proration orders to be effective when the production of the pool reaches 10,000 barrels per day, will be taken up at that time.

C. V. Terrell, commission chairman, explained that the amount of gas produced with the oil in this field requires prompt control, and the possibility of dry gas wells producing from the oil sand have been considered.

Twenty-one rules have been included in the emergency order which will probably remain in effect until the first of July.

Rule 37, governing distances between wells, has been amended to require wells to be drilled at least 330 feet from lease lines and 660 feet between wells. In case of townsite drilling, owners of tracts smaller than a town block will be required to consolidate their interests under the terms of this order, which permits only one well to be drilled on each city block. The usual exceptions under this rule may be made to prevent waste and protect vested rights.

Rules 2, 3, 4 and 5, govern methods of completing and equipping wells to prevent physical waste. At least 850 feet of surface casing must be set, and sufficient cement to fill 300 feet of the annular space back of the casing.

Tests for leaks in the casing at the 3500-foot level are required, and casing clearance permits showing the casing is in proper condition before the plug is drilled must be sworn to by operators. Bradenheads on each well are required with a working pressure of not less than 2000 pounds. These may not be welded and must be equipped with pipe connections and globe valves accessible to the surface. Tests are required on any well showing pressure on the bradenhead, or leaking gas or oil between the surface casing and the oil string.

Each well must be equipped with a blowout preventer, and produced through 2½-inch tubing and a separator or gun barrel. The bottom of the tubing must be no higher than within one joint of the top of the producing sand. Chokes are required on all wells.

Gas measurements must be turned in to the commission at least once each month, and regulations for wells producing more than two per cent salt water are also included. The use of air or gas lift artificially applied is prohibited. Permits certifying to the proper completion and equipment of wells must be had before they are brought in, which shall be done during daylight hours.

Ample regulations for the elimination of fire hazards are included in the order, as well as rules for the prevention of pollution of streams.

Provision is made for discussion of the proposed rule 22 at the hearing in Houston. "The gas production from each well shall be limited to that amount which can be utilized either for these purposes or for commercial or domestic consumption. Dry gas may be vented after gasoline content is recovered, provided the recovered gasoline has more value than the treated gas."

Tax Bill Amendment *Would Make Petroleum Levies* Retroactive

WASHINGTON, June 16.

Seeking to prevent evasion of oil taxes which will go into effect June 21, the House Thursday gave its approval to an amendment to the new tax law under which a tax of one cent per gallon would be imposed on stocks of imported gasoline if the owner has on June 21 more than 25,000 gallons in storage and a tax of four cents a gallon on imported lubricating oil if the owner holds more than 1000 gallons.

Need for the legislation, it was declared by Representative Rainey of Illinois, acting chairman of the Ways and Means Committee, in reporting the measure, arises from charges that big producers and refiners are transferring stocks to subsidiary concerns which are neither producers, refiners nor importers, and hence not subject to the tax.

Enactment of the amendment, it was said, would protect revenues of about $32,000,000 and an estimated 70,000,000 gallons of gasoline and oil which is now being transferred in this way. It was pointed out by the treasury department that during the 15 days between enactment of the law and its effective date a very large portion of the gasoline stocks will be moved.

"Some of the largest producing companies have affiliated sales companies, and can do this through their affiliates in the usual course of business," the department said. "Other large companies, where the producing company is also the company that sells at retail, will find themselves at a serious disadvantage in competition with the companies having affiliates, unless they organize sales companies, transfer their existing stocks of gasoline, and so avoid the tax in respect to such stocks.

"We are informed that the problem relates to some 60,000,000 barrels of gasoline and that the treasury may lose the tax on as much as 40,000,000 barrels. This would amount to a loss of approximately $17,000,000."

The situation with respect to lubricating oil is very similar, and a loss of $15,000,000 is seen unless the legislation is adopted.

These Times . . . and Loyalty

"IN times like these," says a high executive of a corporation not engaged in the oil business, "I would rather have a loyal, intelligent, hard-hitting organization than an unlimited credit."

Which is a tribute to the part that the individual plays in the scheme of affairs in these strenuous times.

When some companies are being forced to reduce payroll, both by letting men go and by reducing salaries, it is easy for an employee to get the idea that a corporation is a heartless sort of thing, that the individual is lost in the shuffle, and that sentiment has vanished from business.

It is easy to lose loyalty under such a situation, yet loyalty today has a higher value from the company's standpoint than it has ever had before. And human sentiment is playing a bigger part in the meetings of the powers that be than it has ever played before.

Witness this quotation, sent THE OIL WEEKLY by Walter C. Teagle, president of Standard Oil Company of New Jersey in response to a letter from THE OIL WEEKLY's publisher:

"The company (Standard Oil of New Jersey and subsidiaries) does not regard its employees as so many men and women, to be taken on when work increases and laid off when it is slack. They have been encouraged to feel that they are a part of the organization, since we rate a loyal and efficient personnel as first among our assets."

This tells the whole story, Mr. Teagle continued, and so it does.

To the man who finds his salary reduced, or who finds himself or a close friend "let out" when a living is hard to make and new jobs are not to be found, sometimes there is little appreciation of the mental agony that the bosses above him, on up to the top, went through before the order to "cut" went out. Sometimes the employees who have been reduced forget that in the reduction of the payroll was the one chance of the company to so conduct its affairs as to insure continued employment for the largest number of people.

"We rate a loyal and efficient personnel as *first* among our assets," to repeat Mr. Teagle.

From the employee's standpoint the hardships unwillingly imposed on many are really a test of worth and loyalty. If a man cracks under it then he isn't fitted for the position he has been holding.

Benefits of Curtailment *Shown in Bureau Report of* April Results

H. J. STRUTH
Staff Economist

BUREAU of Mines' figures for April showed a decided turn for the better, reflecting the upward revision in the industry's general price structure. Supply and demand factors attained a state of balance that furnished the necessary back-log for a higher price structure. The only unfavorable influence on the index of supply was the sharp upward trend of imports. Yet, the rise in foreign oil stocks represented merely a transfer of stocks from foreign countries to the United States. The transfer was not construed to have the effect of increasing the rate of foreign oil consumption. In fact, it is noteworthy that stocks of domestic crude east of California showed a decrease in April of 438,000 barrels. This was accomplished despite a gain in production of about 500,000 barrels.

Productive factors for April showed continued success for curtailment efforts, with crude production and refinery runs at comparatively normal levels. Crude production was maintained at a daily average of 2,257,000 barrels, against 2,437,000 barrels in the same period of last year. Refinery runs amounted to a daily average of 2,371,000 barrels, against 2,490,000 barrels in April, 1931. Gasoline production totaled 33,607,000 barrels, whereas output in April, 1931, was 36,601,000 barrels. In view of the decline in both domestic and foreign gasoline consumption, this trend is favorable. However, it is obvious that refinery runs should have been reduced to a somewhat greater extent during April, since gasoline stocks have not been brought down to normal working limits. Refinery stocks of gasoline on April 30 amounted to 46,957,000 barrels, against 48,145,000 barrels on April 30, 1931. This is also a favorable development, in view of the fact that refining operations have been somewhat in excess of normal since January 1.

With the price level moving into higher ground in April, the barometer showed, for the first time this year, a favorable comparison with last year. Crude prices are 55.9 per cent above this time last year. Mid-Continent 36 gravity crude commanded a price of 92 cents a barrel in April, against 59 cents a barrel at this time last year.

Wholesale gasoline prices also showed a decidedly favorable comparison with last year. U. S. Motor gasoline in Group 3 averaged 4⅞ cents a gallon, against 3½ cents in April of last year. Natural gasoline prices, while having shown some upturn from the recent low levels, was at the same level as in April of last year—2¼ cents a gallon. It will be noted that the weighted index of prices stood at 131.7 in April, marking the first time this year that the index exceeded 100, which represents last year's level. The cumulative index, influenced by low prices prevailing in the period preceding April, did not make so favorable a showing. Still subsequent reports will continue to reflect the advent of higher prices and the index will gradually move into higher ground.

Cumulative gasoline consumption to April 30 shows a decline under last year of 5.1 per cent in domestic demand and 16.2 per cent in foreign demand. Considering general conditions in all lines, this makes a decidedly favorable showing for the petroleum industry.

Forecasts of this year's gasoline demand prepared by the committees of the Federal Oil Conservation Board and The Aemrican Petroleum Institute point to a total decrease under last year of about five per cent. Obviously, if prices hold at their present level, the industry is in a position to show a profit this year, despite a smaller volume. Another more recent development has been a sharp increase in gasoline buying from jobbers in an effort to "load up" before the federal tax is made effective on June 21. This will show up as highly favorable in the barometer for May, although subsequent development may perhaps effect a temporary reversal in the trend of gasoline demand. At any rate, the industry is fairly certain of being able to retain 95 per cent of last year's gasoline business throughout 1932.

It will be noted that the sharp gain in imports of crude and refined products was to some extent offset by an increase in foreign shipments of crude. Exports of crude rose appreciably in April, showing a gain over last year of about 57 per cent, while gasoline exports showed a decrease under last year of about nine per cent. Export of gasoline showed a material increase over those of March, rising to a monthly total of 3,810,000 barrels, against 3,039,000 barrels in March. Cumulative exports of gasoline to April 30 amounted to 13,120,000 barrels, against 15,642,000 barrels last year. Crude oil exports have exceeded last year's cumulative rate to April 30 by 1,400,000 barrels, although imports of crude are ahead of last year to the extent of more than 2,000,000 barrels.

Require Full Report on Oil Movements in East Texas

Austin, Texas.—The Railroad Commission of Texas has mailed out special forms to be filled out regularly by producers, refiners, pipe line operators, and other transporters of crude oil produced and handled in the East Texas field, the filing of these detailed reports to be in accordance with recently issued orders of the commission, aimed at stricter adherence to proration allowances and prevention of "thefts" of oil alleged to have been made in the past. The reports will be mailed to the railroad commission at military headquarters, Kilgore, Texas.

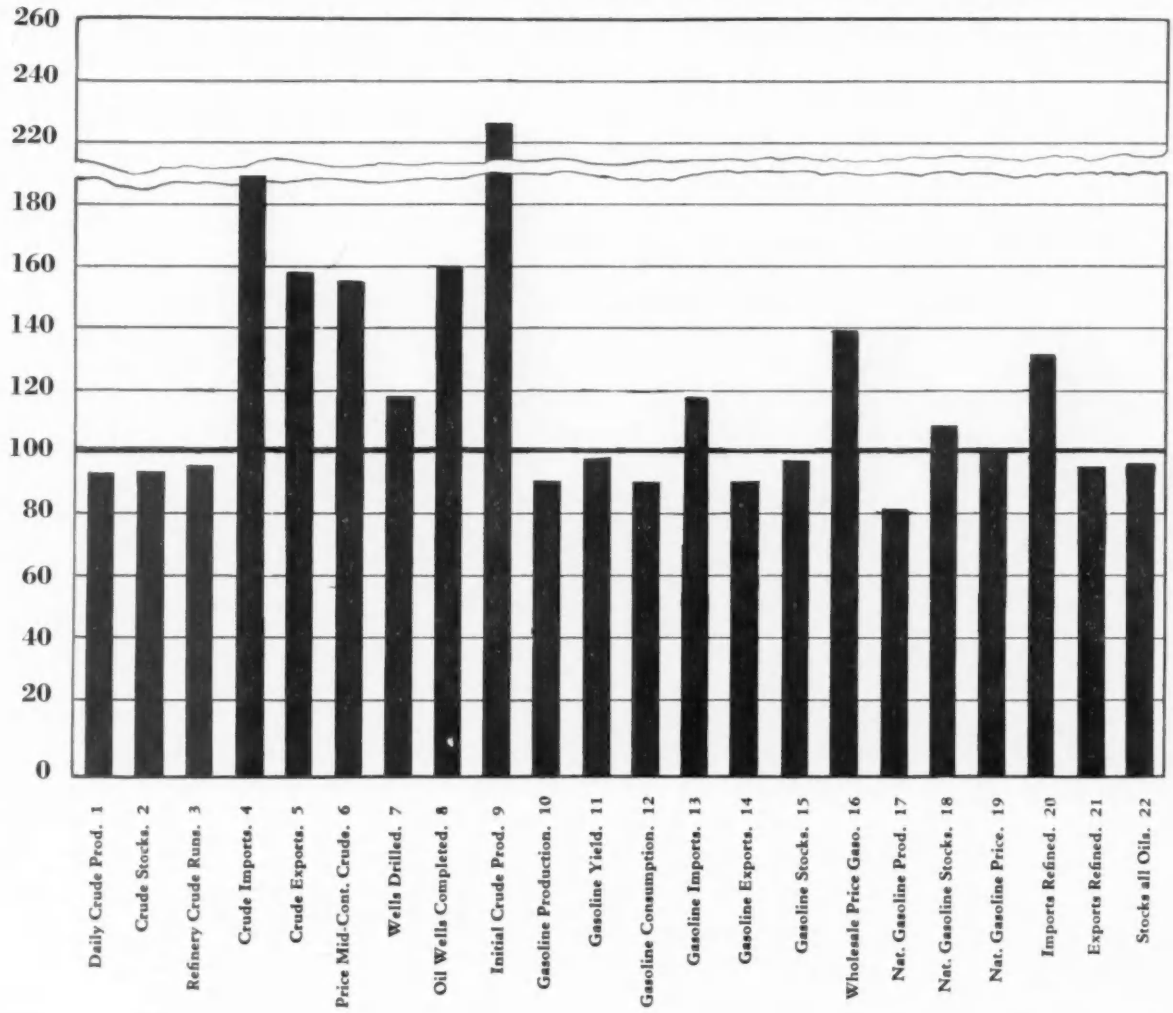
Producers are required to fill out blanks representing daily reports and sworn monthly reports covering gross production and disposal or storage of all oil. Pipe line operators must likewise make regular daily pipe line reports and monthly pipe line storage reports sworn to before notary public covering receipt and disposal of all oil. Similar daily and monthly reports, called "transporter's" reports, will be made covering movement of oil to loading racks, to tanks or tank farms for storage, to refineries, or to other destinations.

The fourth class of reports is that to be filled out daily by operators of trucks, tank wagons, and trailers. A fifth class comprises daily reports of tank car shipments by carriers by rail. Refiners represent still another group affected, and must make daily reports and sworn monthly reports.

Platform Pledges G. O. P. to Tariff on Petroleum

Chicago.—A tariff on oil became the policy of the Republican party with the inclusion of a plank of that nature in the 1932 platform, written at Chicago in the national convention. The plank involves recommendations for duties on all natural resources as well as farm products.

Salient Oil Industry Factors for April, 1932, Expressed in Per Cent of April, 1931. Heavy Line (100) Represents April, 1931.



Oil Industry Barometer—April, 1932

Index of Salient Factors—Current and Cumulative

	Factors—	April			4 Months Ending April 30		
		1931	1932	Index (1)	1931	1932	Index (1)
1	Daily Average Crude Production (Thous. Bbls.)	2,437	2,257	92.6	2,241	2,184	97.4
2	Total Crude Stocks (Thous. Bbls.)	400,568	371,704	92.8	400,568	371,704	92.8
3	Refinery Crude Runs (Thous. Bbls.)	74,706	71,131	95.2	283,933	272,162	95.8
4	Crude Imports (Thous. Bbls.)	4,162	7,691	184.8	17,019	19,286	113.3
5	Crude Exports (Thous. Bbls.)	1,826	2,867	157.0	7,041	8,446	119.9
6	Posted Price 36 Gravity Mid-Cont. Crude (Per Bbl.)[2]	$.59	$.92	155.9	$.78	$.80	102.5
7	Wells Drilled	905	1,070	118.2	3,695	3,948	106.8
8	Oil Wells Completed	479	767	160.1	1,693	2,658	156.9
9	Initial Crude Production (Thous. Bbls.)	1,857	4,228	227.6	3,818	14,111	369.5
10	Gasoline Production (Thous. Bbls.)	36,601	33,607	91.8	135,883	130,993	96.4
11	Gasoline Yield—Average Per Cent of Crude (4)	44.53	43.71	98.1	42.85	44.34	103.4
12	Domestic Gasoline Consumption (Thous. Bbls.)	33,400	30,252	90.5	117,213	111,243	94.9
13	Gasoline Imports (Thous. Bbls.)	1,348	1,572	116.6	5,019	5,118	101.9
14	Gasoline Exports (Thous. Bbls.)	4,187	3,810	90.9	15,642	13,120	83.8
15	Gasoline Stocks at Refineries (Thous. Bbls.)	48,587	46,957	96.6	48,145	46,957	96.6
16	Refinery Price U. S. Motor Gaso.—Group 3 (Cents)[3]	3½	4⅞	139.2	3¾	3½	93.3
17	Natural Gasoline Production (Thous. Bbls.)	3,824	3,102	81.1	15,643	12,790	81.7
18	Natural Gasoline Stocks (Thous. Bbls.)	4,017	4,340	108.0	4,017	4,340	108.0
19	Price Grade "A" Natural Gasoline, Group 3 (Cents)[3]	2¼	2¼	100.0	3⅛	2	64.0
20	Imports of All Refined Oils (Thous. Bbls.)	3,458	4,546	131.4	14,041	15,660	111.5
21	Exports of All Refined Oils (Thous. Bbls.)	8,164	7,772	95.2	33,488	27,745	82.8
22	Total Stocks of All Oils (Thous. Bbls.)	656,549	636,019	96.9	656,549	636,019	96.9
	Weighted Index of Supply	....	....	109.0	....	....	99.6
	Weighted Index of Demand	....	....	105.7	....	....	95.4
	Weighted Index of Prices	....	....	131.7	....	....	86.6

(1)—Last Year—100.
(2)—Weighted Average. (3)—Monthly Average.
(4)—Straight run and cracked gasoline only.

Interstate Compact *Law Gets House Judiciary* Committee Approval

CLARENCE L. LINZ
Washington Representative

WASHINGTON, JUNE 17.

APPROVAL of the McKeown bill authorizing interstate compacts for the conservation of oil and gas has been given by the House judiciary committee, of which Representative McKeown of Oklahoma is a member, and may be passed before adjournment of the session, although there is little or no likelihood that the Senate will take any action before next winter.

As reported to the House, while the measure authorizes "any two or more of the oil-producing states to negotiate and enter into a compact or agreement" it is provided that no such compact or agreement shall take effect until given the approval of Congress and proclaimed by the President.

It is also stressed in the bill that all negotiations toward an interstate agreement and all operations thereunder will be in the hands of the states themselves, with the federal government participating passively. This is indicated by the fact that the name of the proposed board to administer the allocations, etc., is changed from "federal" to "interstate" oil conservation board, one of the members of which, however, will be a member of the Federal Oil Conservation Board. This is further indicated by the elimination of a provision in the bill as introduced, authorizing the President to appoint a representative who shall preside over negotiation of the compact.

A new provision has been added, authorizing the Secretary of the Treasury, in issuing certificates for importation, in the event that applications for certificates exceed the limitation of 5½ per cent of the total estimated domestic demand, to "make an equitable apportionment within said limitations among the conflicting applicants."

Regulate Recovery

The proposed interstate compact would provide for the most effective and economic use of reservoir energy; call for equitable apportionment of the contents of a common source of oil or gas; regulate and control drilling, production, refining, distribution and operation methods so as to promote maximum ultimate economic recovery; provide for the retention underground of supplies whose production would be in excess of transportation or marketing facilities or reasonable market demand and when required to preserve pools of settled production; prohibit unreasonable waste of all kinds; provide for ratable taking of production from competing fields and from wells within the same field, and authorize unit operation of single fields.

The interstate oil conservation board to be established, with members from each of the compacting states, would be authorized to publish, twice a year or oftener, an estimate of prospective requirements from domestic production, from withdrawal from storage and from importation, to meet estimated demand for domestic consumption and for export, and to recommend allocations of production from the several compacting states to meet these requirements. Importations of oil and its products would be limited to 5½ per cent of the total estimated demand for domestic consumption, and 55 per cent of the imports would be limited to crude oil, 16 per cent to gasoline and 29 per cent to other refined products. Permits would be required for importation, to be issued by the Secretary of the Treasury.

The committee, in addition to requiring approval by Congress of the compact after its agreement, instead of in advance as provided in the original measure, also removed the limit of two years within which Congress could withdraw its consent thereto.

Pointing to the "paramount" need for oil conservation, the committee, in its report, declared that the bill "conceives a broad comprehensive and effective plan of conservation of crude petroleum and natural gas deposits, and requires the exercise of the police powers of the state, supported by legislation by Congress. "Congress," it was pointed out, "has no power under the Constitution to deal directly with the conservation of oil and gas found in the several states; that power belongs exclusively to the states. On the other hand, action by the states would be seriously crippled by the due process and commerce provisions of the Federal Constitution, unless Congress exercises its power in behalf of the conservancy legislation of the states. Under our system of government, concurrent legislation by the federal government and by the states is necessary, and may be accomplished by a compact between the oil-producing states, approved by Congress."

It is hinted in the report that, if Congress desires, it may expedite the operation of any agreement by giving its approval in advance, even though the measure provides that such approval shall follow the signing of the agreement by the states. "Ordinarily," it is pointed out, "the states agree upon a compact, and then obtain congressional approval. But congressional approval has frequently

Court Order *Permits Crude Movements from* Wilcox Tanks

OKLAHOMA CITY.

MAGNOLIA Petroleum Company resumed runs from Wilcox Oil & Gas Company's tank farm June 13, following dismissal of the injunction under which the Oklahoma Corporation Commission had caused all Wilcox Oil & Gas Company wells to be closed and production movement stopped from tanks and leases. Litigation was started when it was found that the company had paid gross production tax on 699,000 barrels of oil in excess of its allowable or the allowables of all wells to which it is connected. Action of the Oklahoma Supreme Court is considered a partial victory for Wilcox Oil & Gas Company but it failed to induce the court to pass on the jurisdictional question raised in the petition for a writ of prohibition. The commission had previously vacated its injunction orders issued April 6 and April 8, 1932.

Wilcox Oil & Gas Company must yet face the contempt citation wherein it is charged with refusing to make proration reports as ordered by the commission. In event that it is convicted of this charge, appeal will be taken to the United States Supreme Court where the constitutionality of the law giving power to the commission to punish for contempt will be raised and settled. Careful study of the United States Supreme Court decision in the Champlin case indicates that the commission has no power to enforce its proration orders except through citation for contempt.

Wells of Wilcox Oil & Gas Company are still shut in pending a check by the umpire's staff to determine status of each in regard to allowable production. Statistical departments of oil companies have had difficulty in trying to allocate the 699,000 barrels overproduction to the wells from which it came.

been given in advance. There is at present real urgency for speedy action by Congress, to give approval in advance to an interstate compact which will give immediate efficient leadership to the movement to conserve the petroleum resources of the several states."

A minority report opposing the measure was filed with the House by Representative Montague of Virginia, Oliver of New York, Browning of Tennessee and Tarver of Georgia, in which it was declared the bill "contains extraordinary purposes and powers."

"These objects," it was declared, "appear at once to be unwise and harmful, and perhaps against the Constitution of the United States. For example, the power to fix the supply and control of oil and gas necessarily carries the power to fix the price of such products. And the jurisdiction of a board to fix the percentage of importations of oil and oil products undoubtedly confers legislative power upon a subordinate administrative authority, perhaps never heretofore exercised by Congress. It is a serious question as to whether such a power could be conferred upon the President himself, and for much stronger reasons it should not be conferred upon a board selected by interested parties.

"Moreover, the powers conferred inevitably constitute monopolistic privileges in violation of the anti-trust laws and sound economic principles. Again, under this bill 10 states, or any two of them, may exercise these extraordinary monopolistic and price-fixing powers to the utter disregard of the rights of the other states and the consuming public.

Five-Day Week Inaugurated to Keep More Men on Roll

Houston.—Effective July 1, Humble Oil & Refining Company and Humble Pipe Line Company will initiate a five-day working schedule for all employes with reductions of salaries and wages proportionate with the decreased time, this plan being in accordance with the previously announced decision of Standard Oil Company of New Jersey, to place its organization upon a five-day week.

The latter company announced that under the plan all its 43,000 workers would be kept employed. Compensation reduction amounts to one-eleventh, under the new program, and affects all employes except those receiving salaries of $100 per month or less, with the added provision that none receiving over $100 monthly be cut below that figure. Compensation of workers on hour scale is not affected except in number of hours worked.

Humble Oil & Refining Company and Humble Pipe Line Company will conform with the new adjustment by closing offices from Friday evening until Monday morning.

Study Property Valuations *and Repressure of* Stripper Wells

FLOYD SWINDELL
Staff Representative

TULSA, OKLAHOMA.

FEW there are among petroleum engineers and geologists who have not either directly or indirectly been confronted with the task of evaluating oil and gas properties. At best, the estimation of reserves has been a matter requiring mature judgment based on a large number of variable factors. Under present methods of production control, a new problem has been injected into an already complicated undertaking, that is, the estimation of oil reserves in prorated pools. Recognizing the importance of the problem and the relatively small amount of knowledge concerning it, the Mid-Continent Section, American Institute of Mining and Metallurgical Engineers, had the subject, "Estimation of Reserves Under Proration," as one of the features of its meeting of Monday evening, June 13.

Instead of preparing a paper on the subject H. C. George, Director of the School of Petroleum Engineering, University of Oklahoma, elected to secure material for a round table discussion. Accordingly an expression of opinion was asked of about 40 of the leading geologists and petroleum engineers of the country. About a third of this number responded. It is evident from a review of the replies and the discussion which took place during the meeting, that no one has a concrete idea as to how the problem will be solved. One avenue which seems to offer possibilities is the use of bottom hole pressure decline plotted against known production. Since the study of bottom hole pressure is relatively new it remains problematical as to how these data may be adapted in the estimation of reserves under proration.

Repressuring Stripper Wells

The subject of economics of repressuring stripper wells by James O. Lewis proved exceedingly interesting and was a contribution which may influence activity in the older pools. Mr. Lewis selected for example the properties of Delaware Consolidated Oil Company which controls about 80 per cent of the Delaware Extension pool in Nowata County, Oklahoma. The company was formed by consolidating the properties of several major companies. Repressuring was started in 1926 and since that date approximately 800,000 barrels of oil have been recovered. Total production prior to repressuring had been between 2,000,000 and 2,500,000 barrels. It was shown that in 1926 the average expense for the companies from whom the properties were taken, was over $1.10 per barrel, of which $.84 was lifting expense.

Of the 359 wells now active, 348 have been recased. Under pressure the total expense of $1.10 per barrel has been reduced to an average of .19½ for the last three months of 1931 and the lifting expense from .84 to .14. The expense includes overhead and all current expense except federal taxes, depreciation, and depletion. Analysis of the expense reductions is as follows:

Expenses First Three Months 1926

	Barrel
	$1.10
Reduction in wages and cost of materials @ 20%	.22
Reduction in gross production tax by oil price decline	.02½
Direct economies from consolidation @ 20%	.17
Cutting pumping time to two days per week	.08
Replacing gas engine powers by steam engine powers	.05
Renovating wells and reducing pulling from 3 to ½ crews	.05
Automatic devices at compressor plant	.03
Miscellaneous economies	.02½
Increasing production by 2½ times	.25½
Total saving	.90½

The program was concluded with a paper on, "The Position of the Engineer in the Petroleum Industry," by E. H. Griswold, petroleum engineer, Continental Oil Company. All three papers were unusually interesting as attested by the fact that the livliest discussion of the year was had.

Tulsa.—Officers of the Mid-Continent District of the Oil and Gas Leasing Division of the United States Geological Survey have been moved from Muskogee, Oklahoma, to the Federal Building, Tulsa. All mail should be addressed to Box 311, Tulsa, according to advice received from John M. Alden, supervisor of oil and gas operations.

WHY ALL WIRE ROPE WILL EVENTUALLY BE PREFORMED

Every wire rope will eventually be Preformed irrespective of its size, type, grade and construction because the Preforming process* eliminates the destructive internal stress which is inherent in *every* wire rope that is *not* Preformed.

Because of the fact that internal stress shortens the life of every *non*-preformed rope, it is my firm conviction that the Preformed process* will eventually be adopted by all wire rope manufacturers. What is more, every Preformed rope has the following additional advantages over every *non*-preformed rope of the same size, type, grade and construction:

1. Less internal friction.
2. Each strand carries its share of the load.
3. Less slippage.
4. Resists kinking.
5. Cuts without seizing.
6. Easier to handle.
7. Easier to splice.
8. Makes Independent Wire Rope Center practical.
9. Makes "Lang Lay" practical.

G. O. Moon
VICE-PRESIDENT

AMERICAN CABLE COMPANY, *Incorporated*
230 Park Avenue, New York, N. Y.
Manufacturers of TRU-LAY—the original Preformed Wire Rope

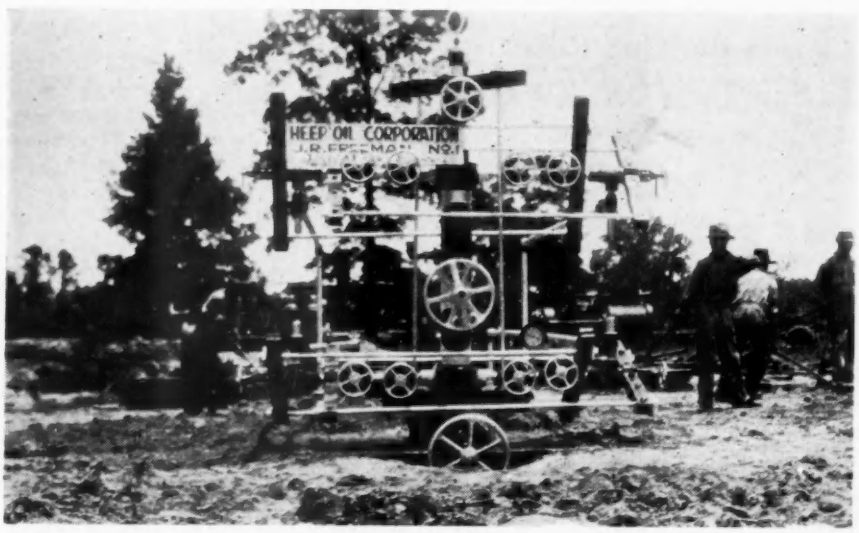
* *55 Wire Rope Manufacturers throughout the world are now licensed to manufacture Preformed Wire Rope under American Cable Company's patents.*

Montgomery County *Has Every Promise of* Important Production

Wm. V. GROSS
Staff Representative

HOUSTON, JUNE 17.

IF traditional signs that have forecast most major booms in oil fields mean anything, look out for Beach, or Conroe, or whatever the geologists and scouts evenetually decide to label the new field in Montgomery County, Texas, Gulf Coast district. It stands a good chance to make a strong bid to share the limelight with East Texas later in the year and during 1933.



High pressure fittings on Heep Oil Corporation's J. R. Freeman 1, east outpost producer of Beach field.

Traditional signs referred to above are of two varieties. One variety which may be taken as fairly indicative of what will happen in the area is made up of geological developments from wells drilled, the big company executive attitude toward the spot as a prospect, the amount of time it takes pipe line companies to go into action for obtaining their share of the flush, and the bee-like swarm of leasehounds into the region. The other variety of "signs," which has approximated infallibility far more closely in the history of forecasting boom fields, results from the actions of a certain group of gentlemen and ladies. They do not have to depend on scientific data or geological information to tell where a new field will be, but merely know it in advance—have known it in advance since the fling of Colonel Drake in Titusville's gala crinoline days—through the functioning of a sixth sense which seems to tell them exactly where to erect their hamburger stands, restaurants, domino parlors, places of amusement and misery in order to get a healthy slice of Johnny Roughneck's salary. Conroe, the nearest town to the new area, already is decorated with unpainted shacks of new lumber, tents, and hurriedly arranged lease offices.

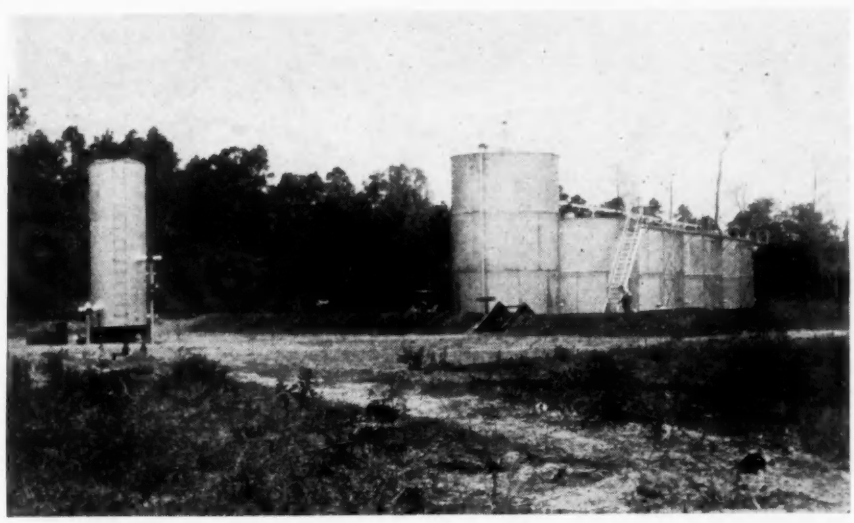
Seriously, wells already drilled and completed in the Beach area indicate strong probabilities of a major petroleum reserve—a market factor. This possibility may explain the tendency of operators to divert appropriations that normally would go into development of proven and semi-proven acreage in the East Texas field. Economics and the wisdom of the "bird in the hand" proverb notwithstanding, the flush area coming into its own still has the greatest appeal to the producer, large or small, as a rule.

Another condition which will beckon operators to Beach is that, because of the few wells producing today, the area will have a high per well allowable for some time to come, there being no apparent danger of a per well allowable anything like as low as it is in East Texas, which seems destined to go to much less than 50 barrels per day. Then too, the proration scheme to be applied to Beach will not, for the time being, put a premium on wasteful drilling as is the case in East Texas.

A permanent advantage enjoyed by the Beach area is the matter of pipe line tariff. Obviously, oil can be delivered to seaboard from Beach for five or 10 cents less per barrel than the lowest tariff in force on East Texas loadings. Casual comparison of the two crudes gives them about the same value to the refiner.

In connection with the transportation problems and aspects of the field, action of Humble Pipe Line Company in laying the first joint of pipe June 17 for an eight-inch screwed line from Beach to its pump station at Satsuma in Harris County, indicates the parent company will exercise the option of holdings of Strake Oil Corporation in the field, and that the former attaches

(Continued on page 53)



Separator and lease tank set up on Heep Oil Corporation's Freeman lease in Beach field, Montgomery County.

WORLD PETROLEUM IN REVIEW

Nienhagen Field, Germany Being Further Developed

Hannover, Germany.—The Nienhagen oil field, so named because of its proximity to the village of that name, is located about 30 miles northeast of Hannover.

Approaching from the south, one can see 40 to 50 wooden derricks in the open fields or partly covered by the woods of the so-called Celler Forst.

Swabbing oil from a well in the Nienhagen field, northeast of Hannover, Germany. The 36-foot steel box used in the operation has just been drawn out.

Extending over 1½ miles in a southeast to northwest direction on the northwest flank of the Nienhagen salt dome, this field has been in process of development since 1922.

The principal operating companies in the territory are Elwerath, Deutsche Petroleum A. G., and Rautenkranz-Groetzinger-Ebag Company.

The older wells of the field have depths ranging from 600 to 900 meters (1800 to 2700 feet, roughly). The operators commonly obtain their production in a very simple manner. A steel box, 36 to 56 feet long, with diameter of four to six inches, is lowered to the bottom of the well, and after filling is raised again. This whole process takes from five to seven minutes, and on an average the wells produce 15 to 20 barrels in 24 hours. Other wells in the field are pumping, and a few are flowing.

Productive capacity of the field is reflected in the record of output during March, 1932, amounting to 55,957 barrels for that month.

Extensions to the proven productive area are being made on the northwest end, close to the village of Nienhagen. Two wells were recently spudded in that area with rotary rigs, one being the property of Elwerath and the other of Deutsche Petroleum.

Canada Building Refineries to Supply its Own Gasoline

The protection given refining operations by the Canadian government through the imposition of import duties and anti-dumping laws continues to place refinery operation on a more favorable basis and at the same time is making necessary the erection of new plants in Canada by companies marketing in that country.

Recently Shell Company of Canada has been forming plans for the establishment of its first Canadian refinery either at Hamilton, Ontario, or Montreal, Quebec. Also, Cities Service Company plans to start immediately construction of a 3000-barrel refinery, equipped with cracking units, near Toronto, and has already let contracts.

Seaboard Oil & Refining Company is erecting a 3000-barrel refinery at Van Couver, British Columbia. Simrall Refining Corporation has but recently completed a new 2500-barrel plant at Amherstburg, Ontario.

Preceding this work and during the last year, British American Oil Company, Ltd. completed its 5000-barrel plant at Montreal, Bell Refining Company built a 1000-barrel plant at Calgary, Alberta, The Radio Refineries, Inc. completed a 1000-barrel plant at Winnepeg, Manitoba and Sterling Oil Refineries, Ltd. completed its 2000-barrel refinery at Moose Jaw, Saskatchewan. In addition, a number of plants have been enlarged, or have been equipped with new cracking facilities during recent months.

Continued expansion of the refining industry in Canada, along with its import duty, is rapidly removing this country from the list of export markets for products refined in the United States.

Chile and Soviet Have Plan to Trade Nitrates and Oil

Santiago, Chile.—Chile's new socialist government recently took under advisement a plan to exchange Chilean nitrates for Soviet Russian petroleum, after decreasing supply of gasoline had made it necessary to resort to rationing. Because of scarcity of foreign exchange increasing difficulty has been encountered during recent months in keeping a supply of petroleum on hand.

Loading crude oil from tanks into horse-drawn wagons on rails, in the Nienhagen field, 30 miles northeast of Hannover, Germany.

MARKETS — STATISTICS

Proposal to Tax Gasoline in Jobbers Tanks Halts Rush for Shipments in Advance of June 21 When Federal Levy Goes On. California Fails to Rate Proposed Price Increase

H. J. STRUTH, *Staff Economist, Houston, Texas*

Oklahoma Turns Production Curve Upward

AN increase in daily average crude production of Oklahoma last week amounting to about 27,000 barrels, turned the production curve upward. Daily average production of the United States amounted to 2,188,625 barrels, an increase over the preceding week of 14,813 barrels. Outside of Oklahoma, the production trend was downward, with Texas, California and Mountain States reporting decreases in output. The outstanding development in the production situation last week was the announcement of a reward in the form of a price increase for the industry in California, provided that production was brought down to the allowable of 476,700 barrels a day. This move was to be effective on June 17, provided that the allowable was attained. Strenuous effort on the part of California operators to reduce output was apparent and the daily average production of the state dropped to 480,000 barrels daily. This was still 3300 barrels above the allowable, but it was felt that the price raise would materialize at the close of the week.

The situation in California has clarified to a remarkable degree and there is every reason to believe that the allowable rate of production will be realized during the coming week. Long Beach and Santa Fe Springs are not much above their allowables, but it will probably take several more days to bring output down to the extent necessary. Some operators feel that tardiness in meeting allowables will be rewarded with even higher prices than anticipated.* It is also believed that higher gasoline prices will be realized shortly, but the major companies are reluctant to increase prices until there is some assurance of effecting the necessary further reduction in crude production.

Oklahoma City production was up 20,500 barrels a day last week, bringing the output of that area up to 117,500 barrels. Seminole also recorded a gain in production of 6900 barrels a day, with the daily average amounting to 141,900 barrels. This increase is not considered important as production of these areas has been somewhat below allowables during the past few weeks. The cumulative average output of the state has been maintained within the limits set by the proration authorities and there is little likelihood of any marked change in the near future.

Kansas also reported increased production last week, with a general upward trend being recorded throughout the state. The increase in production last week amounted to 3000 barrels a day, with state output at a daily average of 97,850 barrels.

Texas Decreases

Texas reported a decrease of 6077 barrels a day, contributed principally by East and East Central Texas and the Panhandle district. Southwest Texas' production moved into higher ground last week, with the daily average for the area at 51,440 barrels, an increase over the preceding week of about 9000 barrels a day. A decrease in production was also reported by the Texas Gulf Coast area, where the daily average amounted to 111,800 barrels, against 113,300 barrels in the preceding week. Output of all districts in Texas amounted to 857,470 barrels, against 863,547 barrels in the preceding week. The situation in East Texas appears to be under control, with output not far above the allowable of 325,000 barrels.

If California crude prices are increased 25 cents a barrel, the posted price of 26 gravity oil in the leading light oil fields will range from 92 cents to 98 cents a barrel, about the same as is now being paid for 36 gravity, Mid-Continent oil. This will have a tendency to equalize the general crude market to the point where the refined oil market structure will show greater stability in the country's leading refining centers. There is very little surplus oil available at less than posted prices and this has had a most favorable effect upon the refined oil market structure.

THE OIL WEEKLY
Estimated Daily Average Production
Week Ending June 18, 1932

	For Week Ending June 18	June 11
Texas Panhandle	51,800	54,420
North and West Central Texas	73,990	73,150
West Texas	175,590	176,075
East Central Texas	54,900	57,112
East Texas	337,950	347,000
Southwest Texas	51,440	42,490
Total Texas, Outside of Gulf Coast	745,670	750,247
Texas Gulf Coast	111,800	113,300
Total Texas	857,470	863,547
Oklahoma City	117,500	97,000
Seminole	141,900	135,000
Other Oklahoma	192,100	192,500
Total Oklahoma	451,500	424,500
Ritz-Decker	13,150	12,250
Voshell	6,250	5,600
Other Kansas	87,450	77,000
Total Kansas	97,850	94,850
North Louisiana	28,550	28,025
Louisiana Gulf Coast	33,400	32,800
Total Louisiana	61,950	60,825
Arkansas	33,775	33,925
Long Beach	73,000	75,500
Santa Fe Springs	61,000	61,000
Midway-Sunset	50,000	50,000
Kettleman Hills	61,000	61,000
Other California	235,000	237,500
Total California	480,000	485,000
Wyoming	34,340	37,880
Montana	7,370	7,570
Colorado	2,910	3,170
New Mexico	34,560	34,945
Total Rocky Mountain States	79,180	83,565
Eastern States*	126,900	127,600
Total United States	2,188,625	2,173,812

*Includes Michigan.

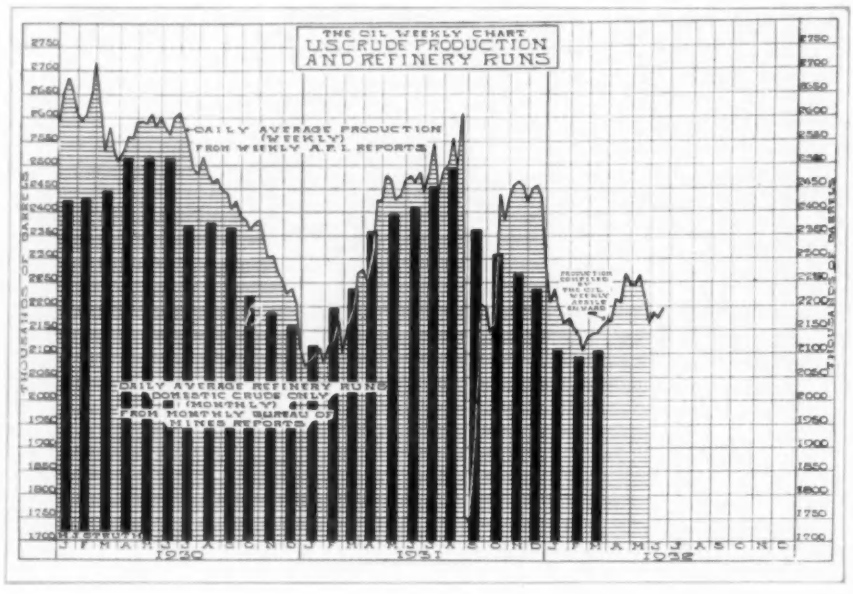
Refinery Runs Up on Increased Demand

THE rush to buy gasoline prior to June 21, the date when the federal tax of one cent is made effective, has temporarily caused refiners to throw caution to the winds. Still runs have shown a material increase, having mounted to a daily average for all refineries in the United States of about 2,414,000 barrels. This represents an increase of about 72,000 barrels a day. Despite this increase in refining operations, stocks of gasoline were drawn upon to the extent of 336,000 barrels, or a daily average withdrawal of almost 50,000 barrels. Total gasoline stocks at refineries, reported to the American Petroleum Institute during the week ending June 11, amounted to 43,911,000 barrels. Compared with the peak established April 23, gasoline stocks have been reduced by nearly 3,000,000 barrels.

Crude and Refined Markets Show Further Strength

A COMBINATION of favorable circumstances has influenced a materially brighter outlook for the crude and refined oil market structure. Particularly favorable at this time is the outlook for higher crude prices in California and the generally stronger price structure in the gasoline market. California operators have been informed that a higher price

*See page 9.


THE OIL WEEKLY CHART
U.S. CRUDE PRODUCTION AND REFINERY RUNS
DAILY AVERAGE PRODUCTION (WEEKLY) FROM WEEKLY A.P.I. REPORTS
DAILY AVERAGE REFINERY RUNS (MONTHLY) FROM MONTHLY BUREAU OF MINES REPORTS
DOMESTIC CRUDE ONLY
THOUSANDS OF BARRELS
1930
1931
1932

Tulsa, June 17.

Action of congress in amending the excise bill to limit tax free refined products inventories of jobbers had a decided effect on the Mid-Continent market and prices apparently had sagged an approximate average of almost a half cent.

Average prices Friday to the trade seemed to be 4½ to 5 cents on the low octane motor fuels, 4⅞ to 5¼ cents on the middle bracket and 5⅛ to 5½ cents on the upper grade.

Maximum allowance of gasoline and lubricating oil inventories apparently will not materially affect the average Mid-Continent broker but the larger resellers most certainly will be stuck for considerable tax if the amendment is made a law. Smaller refiners were inclined to shade prices.

Tax Evading Rush Slows Up Toward End of Week

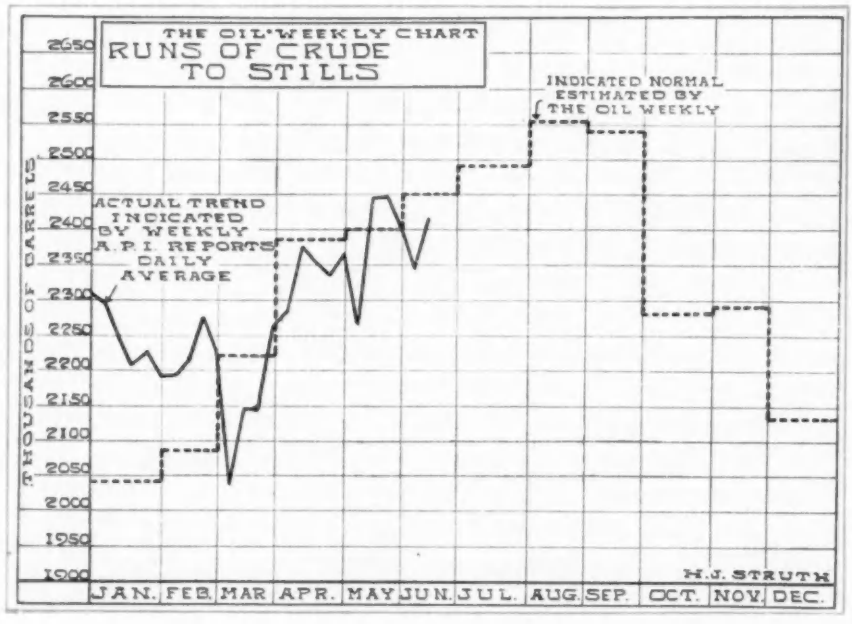
THE Mid-Continent refined market structure had strengthened during the early part of the week but was showing some tendency to slow down at the end of the week. Major refiners were rushing orders which were placed during the first week in June. It is reported that some of the smaller refiners are not getting such a play and are showing indications of being willing to undersell the market. The lower and middle bracket octane motor fuels apparently had gained about a quarter cent above prices of the preceding week and the upper or above 65 octane class was steady at 5¾ to six

for crude will be posted provided that all fields bring output down to the allowable figure this month. Warning was also issued to the effect that any increase in production following a boost in prices would bring a return to former price levels. The industry in California has passed through a similar situation previously and every operator in the state realizes that a price reward must be earned. This makes it almost certain that higher prices will prevail in California shortly and insures unrelented effort to keep production down to economic requirements.

The gasoline market throughout practically all refining centers has moved up appreciably as a result of an unusual flood of buying orders from jobbers. Shipments of gasoline to the jobber trade have increased sharply as a result of pre-tax buying and refiners have temporarily entered a seller's market, with prices ruling strong practically everywhere. It is understood that stocks of gasoline in the hands of jobbers and dealers on June 21 are not subject to the federal tax of one cent,* which accounts for the gasoline buying rush. Lubricating oil sales have also shown a material increase, with prices showing increases of as much as two cents a gallon, wholesale. As a result of increased buying of both gasoline and motor oil, many refiners have experienced a sharp decrease in stocks of those products.

While it is logical to expect some decrease in this kind of buying after June 21, it is believed that present prices can be sustained through the summer months provided that refiners gauge their operations accordingly. Still runs are somewhat above normal at present, as a result of increased shipments to the trade, but it is felt that the tendency will be to reduce operations when the present buying rush subsides. If so, there is every reason to believe that the present price structure will be maintained.

Producers are confident that market prices will remain steady and may show further strength if the refining situation is kept in hand. The general outlook is better than it has been for many months and there is little doubt but that a majority of the companies are now able to show moderate profits on their operations.


THE OIL WEEKLY CHART
RUNS OF CRUDE TO STILLS
INDICATED NORMAL ESTIMATED BY THE OIL WEEKLY
ACTUAL TREND INDICATED BY WEEKLY A.P.I. REPORTS DAILY AVERAGE
THOUSANDS OF BARRELS
H.J. STRUTH
JAN. FEB. MAR APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.

*See page 10.

Crude Runs to Stills, Motor Fuel Stocks, Gas and Fuel Oil Stocks and Cracked Gasoline Production, as compiled by A. P. I. for Week Ended June 11, 1932.

(Figures in barrels of 42 gallons)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		MOTOR FUEL STOCKS					Gas and Fuel Oil Stocks	Daily Charging Capacity of Cracking Units			Cracked Production Daily Average
	Potential Rate	Reporting		Daily Average	% Operated	(a) At Refineries	(b) Bulk Terminals	(b) In Transit	(c) Other M. F. Stocks	Total Motor Fuel		Potential Rate	Reporting		
		Total	%										Total	%	
East Coast	633,700	633,700	100.0	479,900	75.7	6,556,000	10,732,000	1,745,000	445,000	19,478,000	6,821,000	236,003	236,300	94.1	90,100
Appalachian	149,600	137,400	91.8	87,300	63.5	1,709,000	419,000	19,000	340,000	2,487,000	1,046,000	56,300	54,100	96.1	25,700
Ind., Ill., Ky.	436,300	431,500	98.9	273,900	63.5	6,136,000	2,488,000	9,000	275,000	8,908,000	3,981,000	330,400	315,400	95.5	85,900
Okla., Kans., Mo.	485,700	435,200	89.6	246,000	56.5	3,730,000	957,000	.....	1,030,000	5,717,000	3,307,000	237,800	219,500	92.3	49,400
Inland Texas	305,700	233,900	76.5	119,700	51.2	1,535,000	93,000	.....	405,000	2,033,000	2,898,000	98,400	88,800	90.2	21,600
Texas Gulf	532,500	531,500	99.8	465,100	87.5	6,298,000	111,000	.....	380,000	6,789,000	6,779,000	352,400	347,400	98.6	82,900
Louisiana Gulf	147,500	147,500	100.0	109,000	73.9	1,814,000	213,000	11,000	30,000	2,057,000	4,110,000	77,000	77,000	100.0	28,600
North La.—Ark.	85,600	83,000	97.0	54,700	65.9	170,000	31,000	.....	45,000	257,000	744,000	35,400	35,400	100.0	9,700
Rocky Mountain	160,900	143,800	89.4	30,100	20.9	1,949,000	.....	.....	25,000	1,974,000	648,000	99,900	98,400	98.5	9,300
California	914,500	884,100	96.7	464,400	52.5	14,014,000			2,975,000	16,989,000	98,040,000	190,800	190,800	100.0	45,100
TOTALS WEEK: June 11, 1932	3,852,000	3,661,600	95.1	2,330,100	63.6	43,911,000	15,044,000	1,784,000	5,950,000	66,689,000	128,374,000	1,739,700	1,663,100	95.6	448,300
June 4, 1932	3,852,000	3,661,600	95.1	2,261,000	61.7	44,247,000	15,161,000	1,712,000	5,950,000	67,070,000	127,058,000	1,739,700	1,663,100	95.6	465,000

Below is set out an estimate of total motor fuel stocks on U. S. Bureau of Mines basis for week of June 11, 1932, compared with certain June 1931 Bureau figures.

A. P. I. Estimate B. of M. basis Week June 11, 1932 (d)	44,511,000	17,053,000	5,950,000	67,514,000
U. S. B. M. Motor Fuel Stocks June 1, 1931	45,800,000	13,757,000	4,639,000	64,196,000
U. S. B. M. Motor Fuel Stocks June 30, 1931	41,198,000	14,139,000	4,828,000	60,165,000

(a) Stocks at refineries, except in California district, which includes stocks of finished gasoline and engine distillate at refineries, at water terminals and at sales distributing stations and any amounts in transit thereto.
(b) By districts, East of California only. In California, bulk terminal and in transit stocks are included under the "At Refineries" heading. See note (a).
(c) Estimated. Includes motor fuel in pipe lines and unblended natural gasoline at refineries and plants, also blended M. F. at plants.
(d) Estimated to permit comparison with A. P. I. Economics Report which is on Bureau of Mines basis.

cents to the trade. Indications toward the end of the week were that orders designed to beat the feedral gasoline tax were slowing down to some extent and that many of the larger jobbers have been successful in securing a considerable future stock to be delivered between now and June 21. After that date the market is expected to decline but refiners are in wonderful shape to hold a steady rein by decreasing runs to meet current demand. The rush of the past two weeks has materially reduced gasoline stocks at refineries.

Committee Gets Connection for Wells

DALLAS, TEXAS, JUNE 17.

Assignment of pipe line connections for wells in the East Texas field that owners have been unable to arrange for market relief for through their own efforts was accomplished on 15 of the 38 applications on file with the well connection committee during a meeting held here June 17, according to Jack Pew, chairman.

This is a smaller list of applications than was generally believed as the number has been reduced through state proration authorities making deep cuts in the well allowable within the past two months.

A number of the major pipe line companies continue to refuse to give any support to the connection committee in taking care of the unconnected wells and five companies provided relief at this last meeting.

Summarized Review of Field Results

	Completions	Oil Wells	Gas Wells	Failures	Initial Prod.
Arkansas	0	0	0	0	0
California	5	4	0	1	2,280
Illinois	1	1	0	0	20
Indiana	3	2	1	0	230
Kansas	9	4	1	4	569
Kentucky	8	3	0	5	190
Louisiana	4	0	0	4	0
Michigan	2	2	0	0	1,150
Mississippi	0	0	0	0	0
New Mexico	1	1	0	0	4,300
New York	9	9	0	0	60
Ohio	11	6	3	2	27
Oklahoma	19	13	1	5	2,830
Pennsylvania	26	23	2	1	130
Texas	234	191	3	40	1,357,073
W. Virginia	4	1	3	0	12
Miscel.	0	0	0	0	0
Totals	336	260	14	62	1,368,871

New Sacred Heart Producer Develops Water During Test

Tulsa.—Things were not looking so good in the new Sacred Heart pool in Pottawatomie County when at the end of the week Pure Oil Company and others' Tucker 1, SEc Section 34-7n-4e, made a trace of water on a 19-hour test after having produced 1129 barrels water free the day before. Total depth is still 4277 feet.

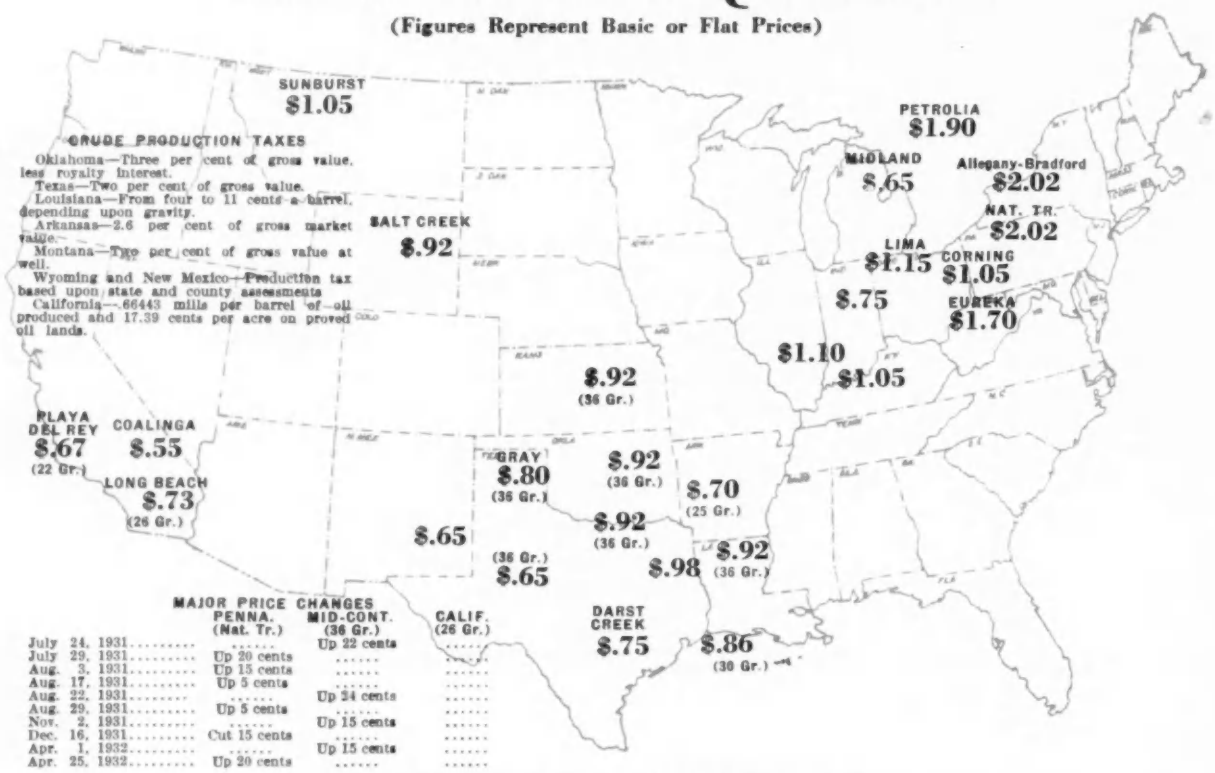
The discovery well continues to make some water but the amount apparently is not increasing.

Comparison of Permits Granted for New Wells

State	For week ending June 17	Total this month	Total this year	Total this date last year	1931 year total
Arkansas	0	1	9	23	34
California	5	14	158	212	342
Louisiana	13	26	215	167	309
Kansas	18	49	283	233	475
Oklahoma	30	80	511	493	842
Texas	240	724	4059	2733	6961
Totals	306	894	5235	3861	8963

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments
California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
July 24, 1931	.....	Up 22 cents	.....
July 29, 1931	Up 20 cents	.....	.....
Aug. 3, 1931	Up 15 cents	.....	.....
Aug. 17, 1931	Up 5 cents	.....	.....
Aug. 22, 1931	.....	Up 24 cents	.....
Aug. 29, 1931	Up 5 cents	.....	.....
Nov. 2, 1931	.....	Up 15 cents	.....
Dec. 16, 1931	Cut 15 cents	.....	.....
Apr. 1, 1932	.....	Up 15 cents	.....
Apr. 25, 1932	Up 20 cents	.....	.....

Official Postings and Differentials

(Revised to June 17, 1932)

California: (Effective June 19, 1931).

Signal Hill, Seal Beach and Alamitos Heights: 14 to 22.9 gravity 65 cents; 23 gravity, 67 cents with differential to two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 cents; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

Huntington Beach: 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

Inglewood: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 76 cents.

Playa Del Rey: 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

Olinda and Brea Canyon: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

Coyote Hills: 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

Santa Fe Springs: 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

Whittier, La Habra and Montebello: 65 cents a barrel.

Torrance: 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

Richfield: 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

Elwood: 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

Newhall, McKittrick and Kern River: 55 cents a barrel.

Midway-Sunset, Elk Hills and Buena Vista Hills: 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

Lost Hills: 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

Coalinga: 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

Wheeler Ridge: 55 cents a barrel.

Athens, Dominguez and Rosecrans: 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

Oklahoma, Kansas, North Texas (Effective April 1, 1932).

Below 29 gravity: 76 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at $1.00.

Texas Panhandle: (Effective April 1, 1932)

Gray County: Below 35 gravity: 71 cents, with differential of 2 cents for each degree to 40 gravity and above which is posted at 88 cents.

Carson and Hutchinson Counties: Below 35 gravity: 66 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 78 cents.

West Texas: (Effective April 1, 1932).

Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico: 65 cents a barrel.

Southwest Texas: (Effective April 11, 1932)

Refugio: Heavy 80 cents.
Refugio: Light: (Same as Gulf Coast—see below).
Gulf Coast: (Effective April 1, 1932).
Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity: 80 cents, with differential of 1 cent for each degree to 40 and above which is posted at $1.00.
Mirando: 80 cents; **Salt Flat:** 75 cents; **Darst Creek:** 75 cents; **Pettus:** $1.00; **Markham:** Same as Gulf Coast.
East Texas: (Effective April 1, 1932)
Flat Price: 98 cents.
North Louisiana and Arkansas: (Effective April 1, 1932).
Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 25 gravity 68 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price $1.00 a barrel.
Smackover: 65 cents.
Rocky Mountain States: (Effective April 11, 1932).
Salt Creek: Below 29 gravity 76 cents; 29-29.9 gravity 78 cents with differential of 2 cents each degree to 40 and above. Top price $1.00.
Elk Basin and Grass Creek: $1.20; **Big Muddy:** 98 cents; **Lance Creek,** $1.15; **Rock Creek:** $1.00; **Sunburst:** $1.05; **Osage:** 98 cents; **Cat Creek:** $1.20; **Pondera:** 90 cents; **Hogback, New Mexico:** 80 cents.
Mid-Western States: (Effective April 11, 1932).
Lima: $1.15; **Indiana:** 75 cents; **Illinois:** $1.10; **Princeton:** $1.10; **Wooster:** $1.25; **Western Kentucky,** $1.05.
Pennsylvania: (Effective April 25, 1932).
Bradford District: $2.02; **National Transit Oil:** $2.02; **Southwest Pennsylvania Pipe Line Oil:** $1.75; **Eureka Pipe Line Oil:** $1.70; **Buckeye Pipe Line Oil:** $1.55; **Corning Crude:** $1.05.
Michigan: (Effective May 17, 1932), **Midland:** 65 cents a barrel. **Muskegon:** 76 cents to $1.00 a barrel.
Canada: (Effective Nov. 3, 1931).
Petrolia: $1.90; **Oil Springs:** $1.97.

In the Mid-Continent . . .

FIRST CHOICE: The OIL WEEKLY

During 1931 the five states of Texas, Oklahoma, Kansas, Louisiana and Arkansas produced 587,915,000 barrels of oil. This was 42.77% of the entire world's oil production.

In these same states, The OIL WEEKLY is preferred three-to-two over the second oil or gas paper by regular paid subscribers in the producing and pipe line business. (On Dec. 31, 1931, the "Producing and Pipe Line" paid subscribers in these states were: The OIL WEEKLY—5,867; Second Paper—3,897.)

Throughout the entire world The OIL WEEKLY is read by the industry's leaders and men "actually in charge" of producing and pipe line operations. These men are constantly studying the merits of equipment, and your advertising message here is read by an interested and wide-awake audience.

THE GULF PUBLISHING COMPANY

Specialized Oil Publications

HOUSTON, TEXAS, U. S. A.

D. R. KNOWLTON

H. C. CHARLES

D. A. McGEE

Geology and Characteristics

Wilcox Sand

THE oil in the Oklahoma City field is found in a pronounced faulted anticlinal fold. Structurally the field has a close resemblance to the typical Granite Ridge pool, such as Eldorado and Oxford, in Kansas, and Blackwell, Garber and Marshall, in Oklahoma. The Oklahoma City pool differs from these structures in that it has a large number of very prolific oil and gas bearing zones. As shown on the west-east generalized cross section of the field (Figure 1), there are six pre-Pennsylvanian major oil and gas producing horizons. These, in ascending order, stratigraphically, are Arbuckle limestone, Johnson sand, Hammer Haindl sand, School Land sand, and Wilcox sand. Sands from the Johnson to the Wilcox inclusive are a part of the Simpson group. For convenience the field is generally separated into three producing zones, namely, Arbuckle limestone, Lower Simpson and Wilcox sand. As shown on Figure 1, the term Lower Simpson actually includes four distinct and separate oil and gas sands which because of operating practice and similarity in production are generally considered as a single producing unit. Of the six producing horizons in the field, the Wilcox sand to which the following discussion is confined is by far the most prolific.

Post-Mississippian truncation of the structure left the Lower Simpson and Wilcox sands exposed in concentric bands of varying width around a core of older Arbuckle limestone. The Wilcox sand being the youngest of the Simpson group is farthest removed from the crest of the fold. The bands terminate abruptly at the fault which limits the structure on the east (Figure 2). Following this peneplanation of the fold, impervious Pennsylvanian sediments were laid down unconformably over the upturned ends of the eroded pre-Pennsylvanian beds.

As shown by Figure 1, the oil and gas in the Wilcox are trapped in a wedge shaped body of sand, the thin edge of the wedge being nearest the crest of the fold. The overlapping Pennsylvanian beds form a fluid-tight seal above, while 70 feet of impervious green shale separates the Wilcox from the next producing sand below. Due to the relatively low dip on the base of the Pennsylvanian beds, the Wilcox sand is encountered at approximately the same depths (6200 to 6500 feet), as the stratigraphically lower producing sands closer to the top of the structure. The productive zone in the Wilcox sand varies from a maximum width of 1½ miles in the north end of the field, where the dips are low to a minimum of one-fourth mile in the south end where the dips are steep. The highest point on the base of the Wilcox sand in the north end is approximately 100 feet higher than the highest point in the south end of the field, due to a southward tilting of the structure.

The Wilcox sand has an average thickness when present

of the . . .

at Oklahoma City

D. R. KNOWLTON, H. C. CHARLES and D. A. McGEE
Phillips Petroleum Company

Wilcox sand wells at Oklahoma City to date have produced 45,000,000 barrels of oil, which is an average of 133,462 barrels per well. Indications point to the high ultimate yield of 752,000 barrels per well. The Wilcox zone is less than 15 per cent depleted and is still a threat to the economic situation.

This paper was presented before the Mid-year meeting, American Petroleum Institute, Tulsa, June 3, 1932.

in complete section of 220 feet. The upper 20 to 30 feet of the sand has large, rounded grains intermixed in a matrix of medium sized, subrounded grains. From these coarse grains to within 10 to 20 feet of the base, the sand is remarkably uniform, well assorted and free from shale partings and other impurities. The basal 10 to 20 feet of the sand has thin partings of light green shale. As a whole it is very loosely bonded, frequently the only material holding the grains together being the oil contained in the voids. Tests made on cores of the Wilcox show that the sand disintegrates into a mass of loose grains when the oil is withdrawn from the pore space. Porosity tests taken on Wilcox sand range from 23 to 32 per cent with a probable average of 27 per cent.

Due to erosion, the Wilcox is not present in complete thickness over most of the area. The 359 wells which have encountered Wilcox sand have penetrated an average of 103 feet. The maximum penetration on record is 262 feet drilled in Phillips Petroleum Company's Clayton 1; however, the section in this well was abnormal. The maximum normal section drilled is 226 feet. The 282 Wilcox wells north of the south line of Section 15, which hereafter will be referred to as in the north area, have an average sand penetration of 111 feet, while the 77 wells in the area south of Section 15, have an average penetration of 76 feet.

Other factors being equal, the initial production of a well in the Wilcox sand in the Oklahoma City field is controlled by the penetration up to a certain limit. Beyond this point, the drilling of additional sand does not materially increase the production of the well. The limiting thickness of sand varies with the size of the casing through which the well is flowing.

There is a greater volume of oil saturated sand above the water level in the north area, due to structural position and lower dips. For this reason and possibly because of a more homogeneous sand body the north area yields much larger wells initially and undoubtedly will prove to be the more prolific area ultimately. Figure 3 shows the area and thickness of oil saturated Wilcox sand above the original water level which was determined to be slightly below

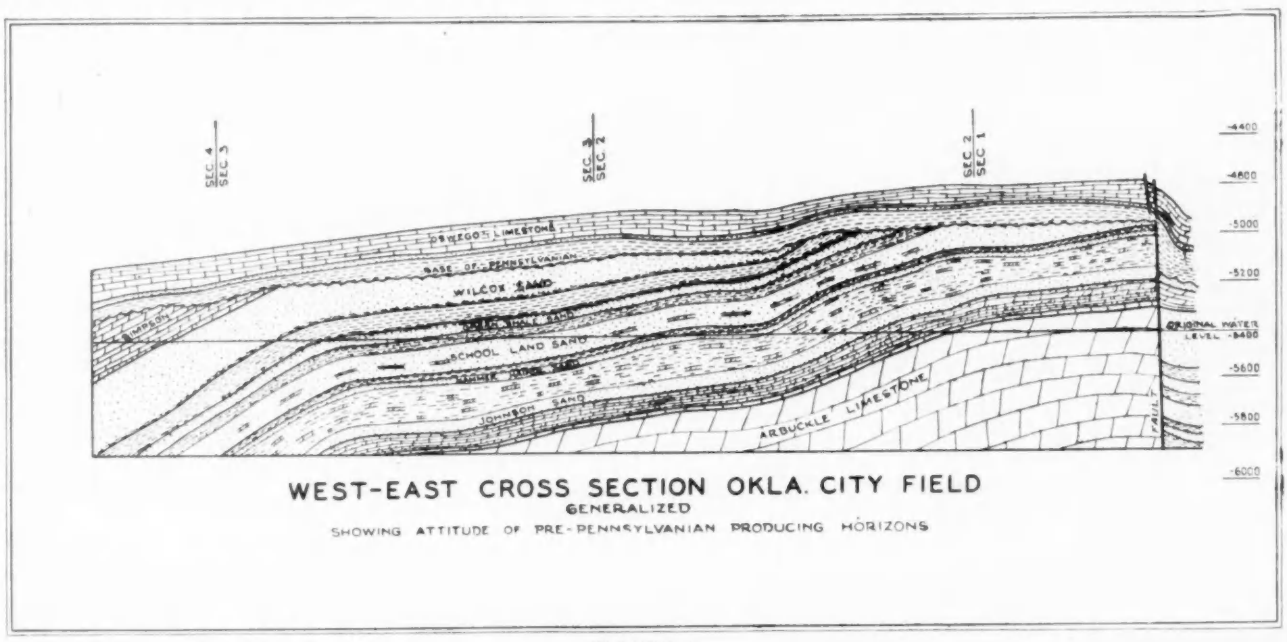


FIGURE 1

5400 feet sub-sea by one of the first wells to produce from the Wilcox sand.

As will be noted on the sand thickness map, the thickness of sand present in the south half of SE Section 15, NE Section 22 and the area around the center of Section 26, are not as great as would normally be expected. Wells drilled in these areas show that erosion at the top has materially reduced the thickness of Wilcox sand. The thickness of sand removed ranges from 20 to as much as 80 feet. That these erosional features are restricted and local in character is shown by the fact that in SE Section 22, adjoining the eroded area, normal thicknesses of Wilcox sand are encountered and there is no evidence of excessive erosion. It is difficult to explain why the Wilcox sand in the southwest part of the field should have these localized erosional low places when the north and south parts of the field show no similar feature. Figure 4 shows the relation of the topography on the erosion surface to the structural attitude of the Wilcox sand.

Water Encroachment

On May 15, 249 wells in the Oklahoma City field had shown water. Of this number, 107 were in the Arbuckle limestone zone, 126 in the Lower Simpson zone and 16 in the Wilcox sand zone. Of the 107 producing wells originally drilled in the Arbuckle limestone area, all have shown water. Of the 126 wells that have shown water in the Lower Simpson, 117 are Johnson sand wells, the lowest producing horizon in the Simpson group.

Five of the 16 Wilcox sand wells that have shown water were edge wells and were dry and abandoned. Five others were low structurally and either showed water on their initial gauge or soon after. Three were wells near the thin, inner edge of the Wilcox zone that drilled through the Wilcox sand to the School Land sand below. These three wells, although the Wilcox sand is open in the hole, are making water from the Lower Simpson sands. The remaining three wells are near the outer limits of production and showed water soon after completion. Figure 2 shows the areas affected by water with the encroachment shown chronologically by six month periods.

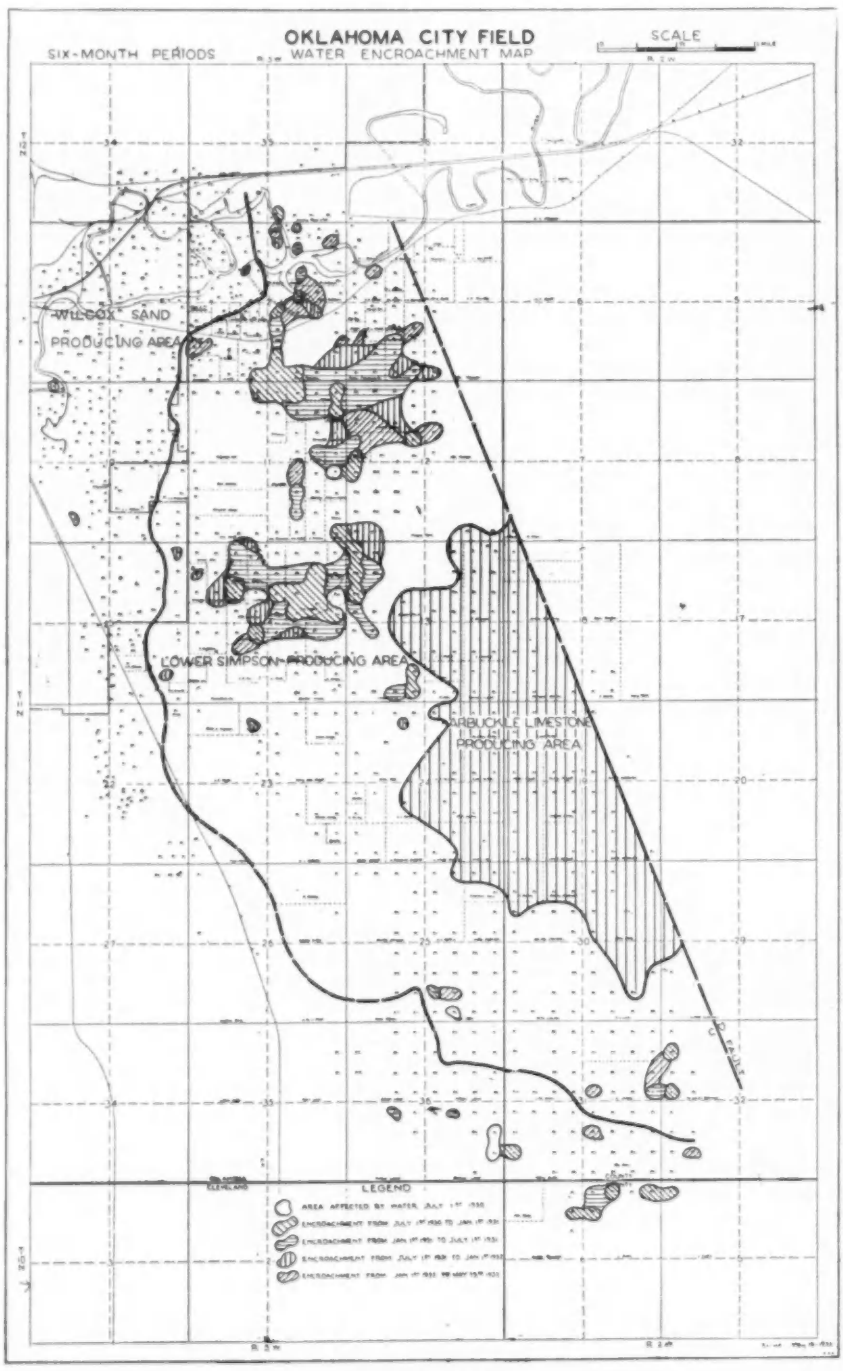


FIGURE 2

The 11 producing Wilcox sand oil wells that have shown water are three per cent of the total number of wells producing from this zone. The calculated 24-hour potential of the seven water wells now producing from this zone is 68,036 barrels which is only 0.8 of one per cent of the total potential of the Wilcox area.

On June 12, 1930, Sinclair Oil & Gas Company's School Land 67 No. 2, an edge well in the Wilcox sand in the south end of the field was completed with a salt water content of approximately 35 per cent. This was the first salt water encountered in the Wilcox sand and afforded an accurate determination of the original water level. This was only 2½ months after the first Wilcox sand production had been found in Indian Territory Illuminating Oil Company's Mary Sudik 1, which blew out while drilling and became famous as the first of the wild wells of the Oklahoma City field. The original water level was calculated to be at 5425 feet below sea level.

From time to time other well low structurally have been completed, which either showed water initially or have since started cutting so that an accurate record of the rise of the water level is available. The water level at present is approximately 5356 feet below sea level. This represents an average vertical rise of about three feet per month.

Due to the uniform texture, the shape

of the sand body and the slow withdrawal of oil, water encroachment in the Wilcox sand up to the present time has been very uniform. The wedge shaped body of sand, sealed at the top and the inner edge presents ideal conditions for a complete and efficient flushing of the oil contained. Water encroachment can occur only as an edge water drive up the dip except in those areas where water is permitted to enter the Wilcox sand through combination wells which have both Wilcox and Lower Simpson sands exposed in the same hole. When water appears in these combination wells, the Wilcox sand, since it is separated from the sands below by impervious shale, can and will be protected by plugging off the lower Simpson sands.

Production Practices

In the Wilcox area in the Oklahoma City field the general practice is to set 6⅝-inch or seven-inch casing as a flow string on top of the Wilcox sand at approximately 6300 feet. Twenty wells have set 9⅝-inch flow strings on top of the Wilcox and in a few instances strings of 5 3/16-inch casing have been used. The present method of taking potentials is to obtain a four-hour continuous test of the well soon after completion. This gauge times six gives the theoretical 24-hour potential of the well. The present allowable is approximately two-thirds of one per cent of this potential plus a 25-barrel flat allowable per well. Due to this method of proration in the field, it is necessary, in order to produce a maximum amount of oil, to obtain the largest potential possible at the designated intervals, which at present are semi-annually.

It has been definitely determined that the potentials in the prolific area in the Wilcox are limited by the diameter of the flow string. This condition is dependent on various factors such as thickness of sand, porosity, and position of the well on the structure. As long as the present proration rules are in effect the operator cannot afford to limit potential and consequent allowable by using screen pipe, tubing, or bottom hole chokes to improve production methods or lower gas/oil ratios. The field is consequently not being produced under the most ideal conditions from a gas energy standpoint. This condition could not be entirely corrected unless withdrawals were made only from certain wells favorably located structurally which could be accomplished solely by some unit operation plan. The condition, however, could be improved by the elimination of periodic open-flow potentials which would enable the operator to equip wells so as to reduce the gas/oil ratio to a minimum. Proper surface choking between potential periods has realized a large saving in gas energy but is not as effective as a carefully studied tubing program with bottom hole chokes.

The limited amount of data available show the bottom hole pressures are declining uniformly over the Wilcox sand area. Wells on the western edge near water show a bottom hole pressure of 2056 pounds corrected to a sub-sea depth of 5400 feet, while wells on the eastern fringe show 2023 pounds bottom hole pressure. This small variation over a wide area indicates the pressures within the reservoir adjust themselves rapidly due to the slow rate of withdrawals. This means that little of the oil will be trapped in the sand and the edgewater drive will be very efficient with a consequent high ultimate yield. The above mentioned gas wastage will not to any great extent cut down the ultimate yield as long as the bottom hole pressures remain locally uniform. It does however, mean the wells will have a shorter flowing life and more expense will be involved in bringing the oil to the surface.

The experience of Phillips Petroleum Company in Burt

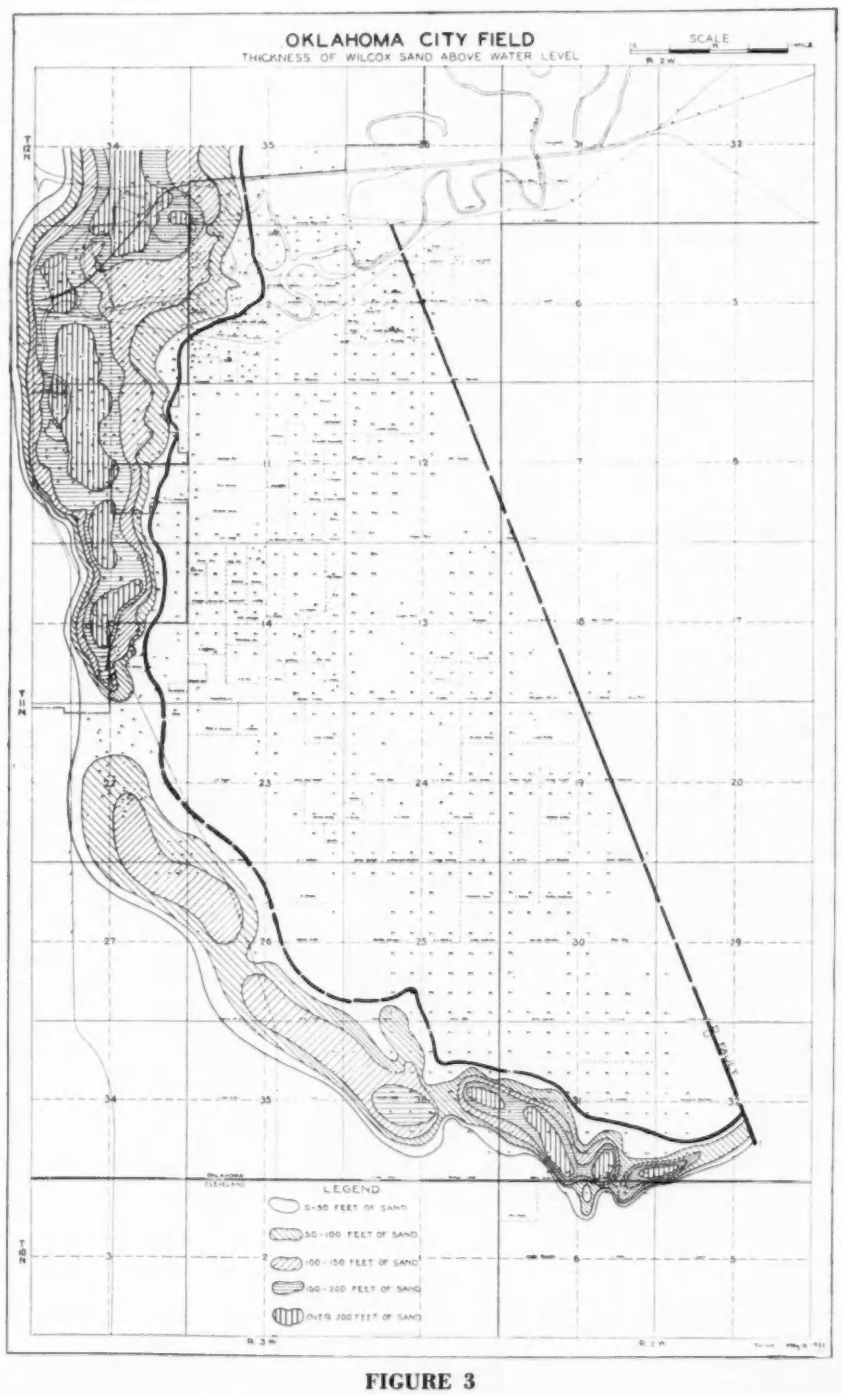


FIGURE 3

1 shows that plugging is not necessary in the Wilcox sand in order to effectively produce the oil from a well which actually has the water level above the bottom of the hole. This well was drilled near the western edge of the Wilcox sand, close to edgewater. It produced only 19,000 barrels of oil before water started showing through a 1¼-inch choke against 510 pounds back pressure. The well was gradually pinched back until it was found it would produce no water through a three-eighths-inch choke at the rate of 21 barrels per hour, although it would produce 12 per cent water through a half-inch choke. This well has produced 102,600 barrels of oil free from water since the appearance of water April 18, 1931. While the well was shut in a sample was taken 15 feet below the top of the sand, which showed clear salt water. This indicates these Wilcox wells can probably be produced under proper rates of flow until the edgewater has risen to a point only a few feet below the top of the sand.

Large volumes of sand have been produced from many of the wells in the Wilcox area. As much as 700 barrels per hour or totals from 4000 to 5000 barrels per well are not uncommon. In one well which was producing from 95 feet of Wilcox sand, the volume of sand removed from the well would leave a hole in the producing formation, if the hole is assumed to be cylindrical, slightly over 21 feet in diameter and 95 feet in length. However, recent tests have shown that in practically all cases where wells have produced large volumes of sand, only a few feet of hole is open below the casing. These adjustments within the sand body have increased the drainage area as shown by a pronounced increase in production in every well that has made sand. The experience on the above mentioned Burt well indicates that these large volumes of sand that have been produced with the oil will have little or no effect on the future production problems, as control of water can be accomplished by proper back pressures or better yet by proper sized tubing.

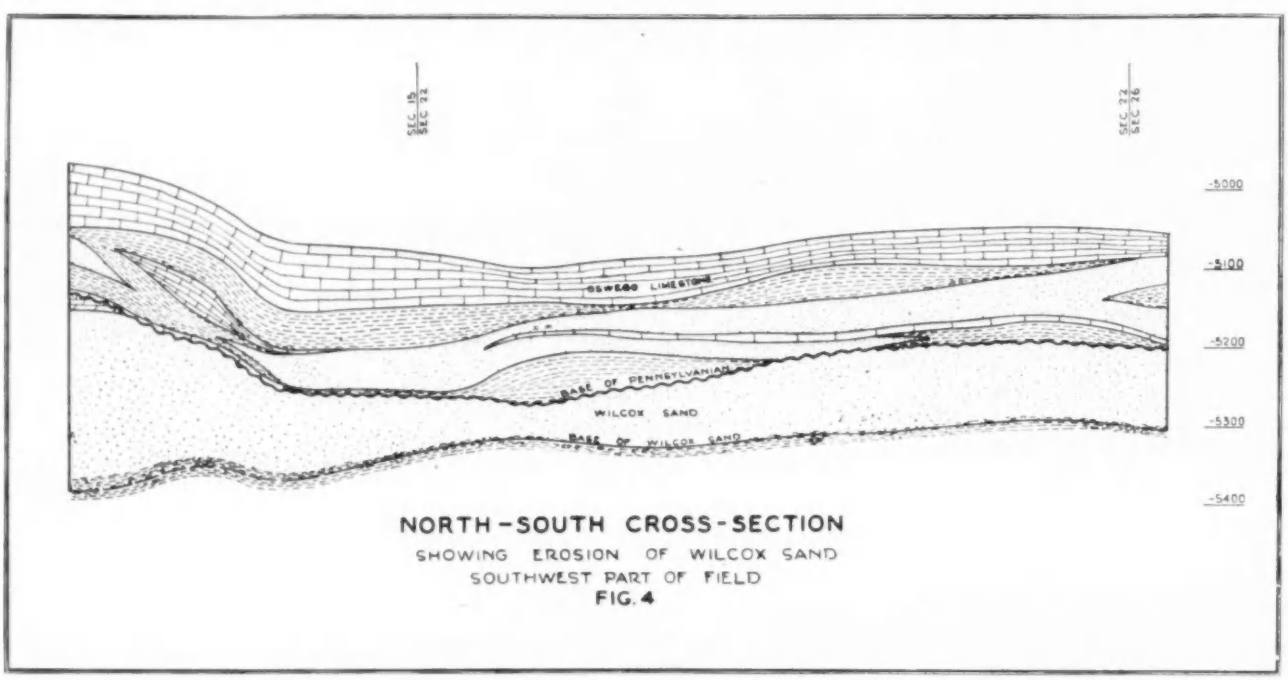
Extent and Development

The Wilcox sand area at Oklahoma City is unquestionably the best producing field of any appreciable size that has ever been developed in Oklahoma. This part of the Oklahoma City field may well be classified as a separate and distinct area. As previously set out, this sand is separated from the Lower Simpson zone by impervious shale.

The total estimated productive area of the Wilcox sand is 5250 acres or 21 per cent of the total productive area of the field. Of the total estimated productive acreage in the Wilcox zone, 3450 acres are within the corporate limits of Oklahoma City. Of the area within the city limits, 1700 acres or 49 per cent are in the U-7 zone—that part of the city open to drilling. The remaining 1750 acres of the area within the city limits underlie a closely built up residential section in which drilling is prohibited. This part that cannot be drilled is 33 per cent of the entire area estimated to be productive in the Wilcox sand. This leaves 3500 acres open to drilling of which approximately 2460 acres, or 70 per cent, have been developed. Of the developed area 1710 acres are in the north area and 750 acres are in the south area.

On May 1, 1932, 359 wells had drilled into or through the Wilcox sand. Thirteen of these wells were low structurally. Ten of the 13 were dry and abandoned with water in the Wilcox sand; two were plugged back to the upper Simpson; and one was plugged back to an uncomformity sand at the base of the Pennsylvanian. Six more wells located near the edge of the structure either showed water initially or soon thereafter, and one of these wells plugged back to the Pennsylvanian. Thus of the 359 wells completed and tested, only 3.9 per cent have been dry and abandoned or plugged back to horizons above the Wilcox sand. A total of 346 wells have produced from the Wilcox sand. They have an average initial production, calculated on a 24-hour rate basis of 30,151 barrels per well. Of these wells 274 are in the north area and have an average initial production of 34,308 barrels per well, while 72 wells in the south area have an average initial production of 16,007 barrels. A number of exceptionally large wells have been completed, 50,000 and 60,000 barrel wells being common. Phillips Petroleum Company's McBeth 1, the largest well on record, produced for two hours and 15 minutes at the rate of 101,002 barrels daily. The gas volume gauged 67,000,000 cubic feet. The average initial gas volume per well for the 346 wells is approximately 40,000,000 cubic feet per day.

Up to May 1, 1932, the total recovery of oil from the



NORTH-SOUTH CROSS-SECTION
SHOWING EROSION OF WILCOX SAND
SOUTHWEST PART OF FIELD
FIG. 4

Wilcox sand was 45,110,417 barrels, an average of 133,462 barrels per well. The recovery on the above date per well in the north area was 136,808 barrels, while in the south end it was 120,880 barrels per well. For the 2460 developed acres the average production per acre was 18,337 barrels. The north area had produced 21,361 barrels per acre, and the south area 11,443 barrels. The average elapsed time from the date of completion to May 1, 1932, for the 346 producing wells not including the 65-day proration shut down period, is 11.7 months.

As an example of recoveries in parts of the field, W½ NW Section 2 has already produced 9,049,094 barrels, or 113,000 barrels per acre. This section was the first to be developed in the north Wilcox area. There are 32 wells producing on this 80-acre lease. The average sand thickness is 95 feet, which gives the 80 acres a recovery to date of 1188 barrels per acre-foot of sand. The total potential production of all the wells is calculated to be 1,294,000 barrels on a 24-hour basis. This is an average of more than 40,000 barrels per well, while the initial production average is only 44,000 barrels. Already the average well has produced a total of 283,000 barrels while many of the first wells drilled have produced more than 400,000 barrels.

The sand thickness map (Figure 3) brings out in detail the sand thickness and volume of pay sand which was either encountered or could have been penetrated. The total volume of oil saturated sand above the original water level, which was assumed to be 5400 feet sub-sea, amounts to 440,000 acre-feet. This does not include 1750 acres within the city limits upon which drilling is not permitted. Of the total acre-feet of sand 64 per cent is in the north area and 36 per cent in the south area.

Future Recoveries

Production methods necessitated by the stringent curtailment of production under the proration schedule, the variation of the chokes through which wells are producing, and changes in reservoir conditions while wells are shut in between flow periods, make impossible the use of production decline curves for estimating ultimate yields in the Oklahoma City field. The next best method then would be an accurate computation of total sand volume and an estimated per acre-foot yield. Data obtained from other Wilcox sand pools in the state indicate that a wide variance exists between these older fields. There are Wilcox sand pools that show an acre-foot recovery as high as 1500 to 1600 barrels. The St. Louis pool for example which has already produced as much as this. The Seminole City pool will undoubtedly yield over 1000 barrels per acre foot. There are individual leases within this pool that have had a recovery up to 2500 barrels per acre-foot.

Owing to the fact that bottom hole pressures are equalized and that water encroachment can be controlled, together with a slow and constant rate of production it would seem only just to allow a 1000-barrel per acre-foot recovery to the north area and 600 barrels to the south area. This would give an ultimate yield of 376,000,000 barrels, or an average of 850 barrels per acre-foot to the entire zone. Since the sand has proven to be so regular and homogeneous over most of the area, yielding wells so remarkably uniform in size, and since no allowance has been made for the vast amount of oil saturated sand under the city that will not be drilled, this figure appears to be fair and conservative.

The total cost of drilling and equipping a well at Oklahoma City, including lease hold cost, is estimated at $160,000. Deducting royalties and allowing for the present selling price of oil to prevail over the life of the property, each well will need to produce 200,000 gross barrels to pay out the original investment. Not over a maximum of 500 wells will eventually be drilled in the entire zone, which at the estimated ultimate recovery, will average 752,000 barrels per well.

It is evident that the average Wilcox sand well at Oklahoma City is a sound investment and will "pay out" many times over. In addition to this the Oklahoma City field is and will be for several years an important factor in respect to potential production in the United States.

Olson Drilling Company's crew on afternoon tour, drilling Phillips Pertoleum Company's Roush 1, Oklahoma City. This crew is using drill pipe and tool joints which have made seven holes and still usable after making 38,000 feet. Crew as they stand are: left to right: W. H. Shoemaker, Tool Pusher; John Goe, Driller; H. C. Smith, Floor Man; H. C. Weller, Floor Man; Bert Pierce, Floor Man; Bob Ashby, Derrick Man.

Surface and Sub-Surface Equipment Loads *of* Bandwheel Powers

K. B. NOWELS
Chief Petroleum Engineer
Forest Oil Corporation
Bradford, Pennsylvania

Assisted by
R. E. WARNER
C. E. LEDEBUR
E. HUNGIVILLE

PART TWO

REFERENCE has been made to the proper balancing of a bandwheel power, and in this service the dynamometer has its most important use. Although it was stated that the same weight should be carried on each eccentric, this is only a makeshift measure for balancing, unless precaution is taken to see that this weight is evenly distributed around the circumference of each eccentric. Even an unbalanced power may still have the same load on each eccentric.

In balancing a power, a well weight chart similar to Figures 3 and 4 should be drawn. This shows lines extending from Power No. 11 to all of its wells. The length of each line depends upon the weight of the well at the power, and should be drawn to the scale of one inch equal to 2000 pounds. The forces and their direction in movement at a bandwheel power are subject to the same mechanical laws that govern all forces, and may be balanced. A force diagram should be drawn showing the extent of the unbalanced condition in each power eccentric and the resultant of all forces (well weights) will show the direction or position on the eccentric where additional pull or weight must be added.

Where two forces are acting in divergent directions, the resultant of these forces may be determined graphically by drawing straight lines to scale in the direction of each force application. If a parallelogram be constructed with these lines comprising two of its sides, and the remaining two sides consist of lines drawn parallel to them, a line may then be drawn as a diagonal connecting the point of origin with the far end of the parallelogram, and will represent the resultant of the two forces. The length of this line should then be scaled, as it represents the amount of force necessary to balance or offset the other two forces. Its extension in the opposite direction gives the direction in which the third force must be applied to cause balance.

A short cut to the above operation is to eliminate the construction of the parallelogram, and to find where the position of the extreme end of the resultant line would be by simply moving one of the force lines, in its same relative position, and attach it to the end of the remaining force line. The unattached end of the line just moved is now in the position of the extreme end of the resultant, as described in the first operation. The same procedure is followed in resolving several forces, and this plan was followed for each well's force line of Figures 3 and 4. The completed force diagram is shown in Figure 5.

The point of origin, of course, is the power, and each well, as represented by its force (weight) line is plotted parallel to its original position, but attached by its "tail-end" to the "head" of the preceding one; the order of attachment of each successive line moving in a clockwise direction. If an eccentric is in perfect balance, the terminal point of the last moved force line will coincide with the point of origin and the resultant of all the forces is zero.

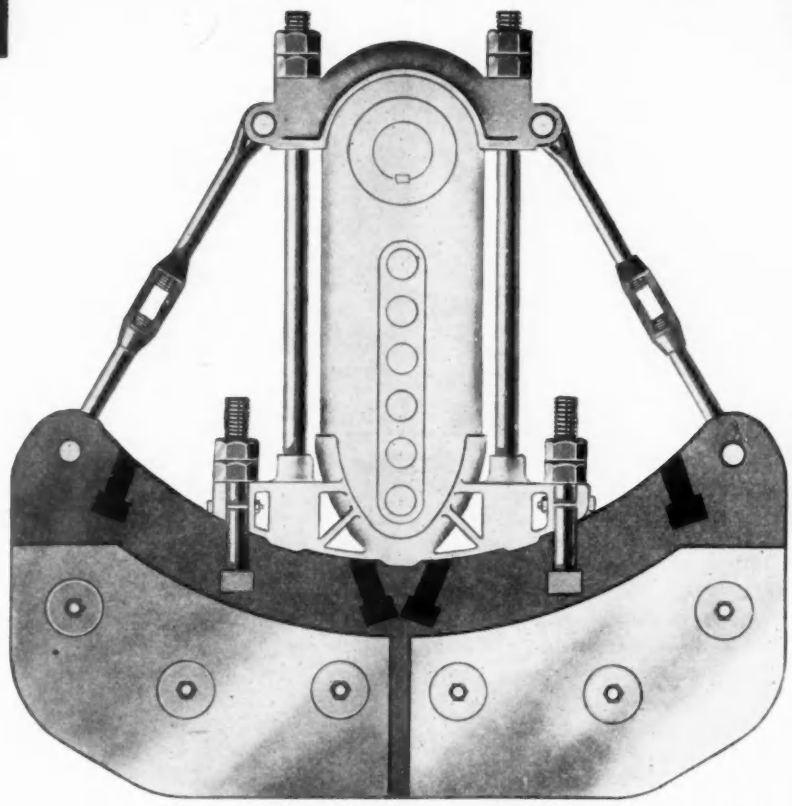
The construction of the force diagrams for Power 11 in Figure 5 was based on well weights determined by the dynamometer in August, 1930, and not those listed in Table No. 2, which were secured in April, 1932. The wells now are slightly heavier than in 1930, due to increases in the amount of water pumped and paraffin. As shown by Figure 5, Power 11 was decidedly out of balance, by the fact that the terminals of the force lines for wells L 94 and IG 83 do not coincide with the point of origin. By drawing lines between these terminal points and the point of origin, two sides of a parallelogram are formed, which if completed, and the diagonal drawn between the far end and point of origin, gives the resultant of the combined forces necessary to place both eccentrics in balance. The extension of this resultant shows the direction in which these forces must be applied.

It is preferable to treat both eccentrics separately and for this reason it is necessary to draw a rectangular parallelogram for each, using as two of the sides a line drawn through the ends of force lines perpendicular to a horizontal line running through the point of origin; and a line perpendicular to this line at the point of origin. Such lines are shown by B and D in Figure 5. The completed parallelogram for the upper eccentric is shown by B, C, D, and E. Its diagonal "A" is the necessary resultant of 9100 pounds of vertical component or "pull" and 16,450 pounds of horizontal component necessary to effect a balance.

Knowing the direction of pull needed to balance the power, as given by the diagonal resultant, it remains to choose wells on the heavy side of the eccentric for transfer, whose total vertical components (vertical with respect to vertical line) multiplied by 2 are approximately equal to 9100, and whose horizontal components (with respect to horizontal line through point of origin) multiplied by 2, are approximately equal to 16,450. By components, is meant the projection of the force line to either the horizontal or vertical lines through the point of origin, as shown in Figures 3 and 4.

A convenient method for choosing the proper wells whose direction of pull should be changed, is to draw horizontal and vertical axes through the power or point of origin and to label them plus or minus, as shown in Figures 3 and 4. The portion of the horizontal axis to the left of the power is plus, and minus to the right. In the vertical axis, the section above the power is plus, and below, minus. Keeping in mind the horizontal and vertical axes, it is seen that the extension of the resultant "A" for the upper eccentric

Positive COUNTER BALANCE



The newly perfected Brewster Positive Counter Balance can be placed in position or detached without loss of time, simply by unscrewing the long thread bolts. It is attached to the crank by sturdy 2½″ connecting rods with additional turn buckles of 2″ rods. The adjustable head piece and weight support are assembled in a most rigid form and are made of Electric Steel. Babbitt metal is run around he body to prevent uneven fits on the ·ough casting.

The design of the Brewster Counter Balance allows an extra hole for lengthening the stroke—by casting a steel crosshead into the bracket support a four hole crank can be converted into a durable and efficient six hole crank.

★ BLUEPRINTS AND INFORMATION FURNISHED ON REQUEST.

The Brewster COMPANY~INC.
Shreveport,Louisiana

Warehouses: The Iverson Specialty Co., Oklahoma City, Phone 2-2833; The Brewster Houston Store, 2000 Harrington St., Capitol 2031. Longview, Texas, 313 E. Cotton Street, Phone 781.
Export Distributors: Acme Well Supply Co., Inc., 136 Liberty St., New York City.

PCB 1

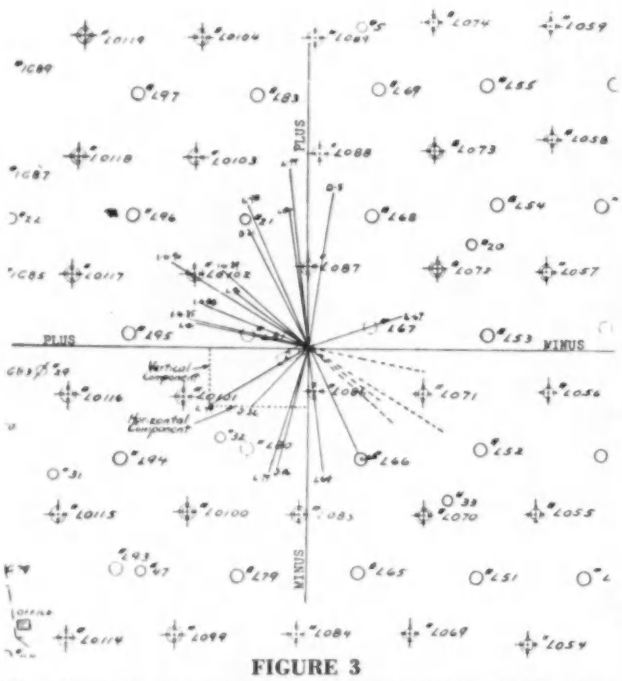


FIGURE 3

Map Showing Balancing of Load on Upper Eccentric of Drake Power 11, With Vectors or Force Lines Representing Weights of Wells.

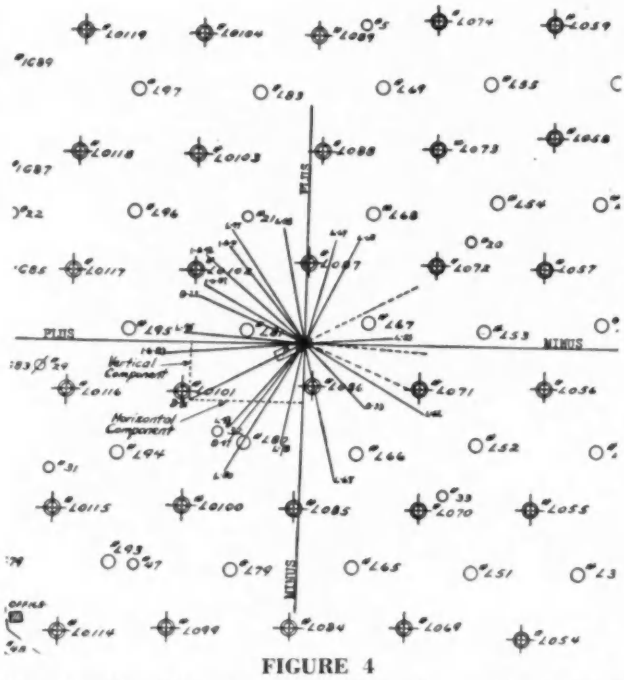


FIGURE 4

Map Showing Balancing of Load on Lower Eccentric of Drake Power 11, With Vectors or Force Lines Representing Weights of Wells

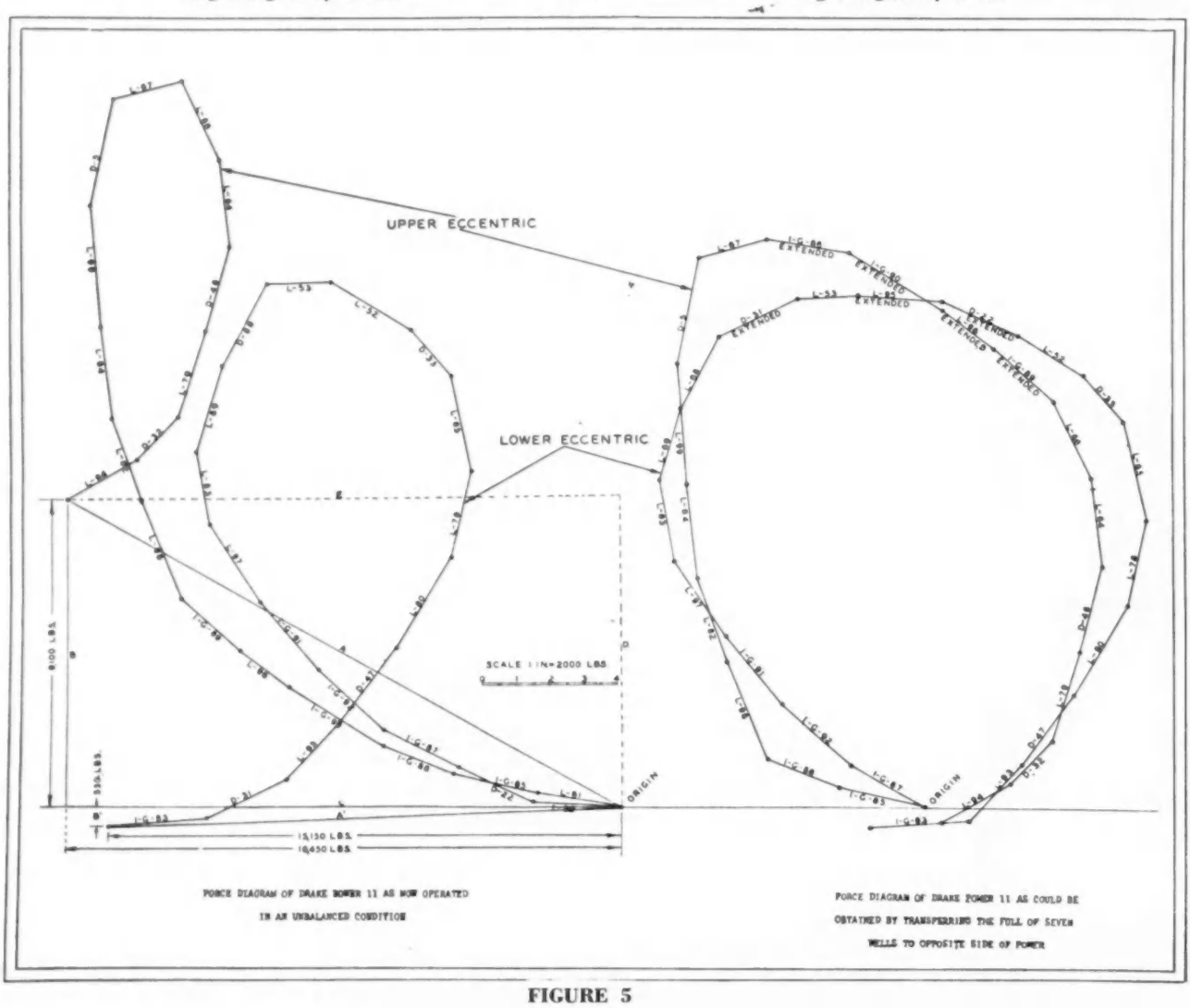

UPPER ECCENTRIC
LOWER ECCENTRIC
SCALE 1 IN = 2000 LBS.
ORIGIN
13,130 LBS.
16,450 LBS.
FORCE DIAGRAM OF DRAKE POWER 11 AS NOW OPERATED IN AN UNBALANCED CONDITION
FORCE DIAGRAM OF DRAKE POWER 11 AS COULD BE OBTAINED BY TRANSPERRING THE FULL OF SEVEN WELLS TO OPPOSITE SIDE OF POWER

FIGURE 5

places it in the lower right hand quadrant, where both its vertical and horizontal components have values of minus. Because of this, it is necessary to choose individual wells for "pull transfer" whose collective horizontal and vertical components multiplied by 2 most closely approximate —16,450 and —9100, respectively. Those chosen for transfer may be listed as follows and total —9680 and —16,940:

Upper Eccentric

Well No.	Vertical Component	Horizontal Component
IG 90	— 1720	— 2800
IG 85	— 440	— 2420
L 96	— 1100	— 1480
IG 89	— 1580	— 1770
Total	— 4840	— 8470
	2	2
	— 9680	—16940

The same procedure may be followed with the lower eccentric in choosing the wells for transfer whose horizontal and vertical components most closely approximate —15,150 and +550 respectively. Their listing is as follows:

Lower Eccentric

Well No.	Vertical Component	Horizontal Component
L 95	— 160	— 2540
D 22	— 950	— 2230
D 31	+1150	— 2350
Total	+ 40	— 7120
	2	2
	+ 80	—14240

The lower eccentric is still out of balance by +470 and —910, but this is about the best that can be accomplished.

A study of the well weights of Power 11 showed that if wells IG 90, IG 85, L 96, and IG 89 on the upper eccentric, and L 95, D 22, and D 31 on the lower eccentric could have their rod lines changed in such a manner that the pull could be changed over to the opposite side, as shown by the dashed lines in Figures 3 and 4, both eccentrics would be approximately balanced. Assuming that these changes had been made, a force diagram, as shown by Figure 5, was constructed and it shows the power balanced. In balancing a power, it may be necessary to experiment with the choice of wells to be transferred before a balanced diagram can be secured.

In transferring the pull of wells to other positions on an eccentric to secure balancing, some rod lines will have to be changed or the use of "tie-backs" resorted to.

Before the construction of a new power in the Bradford field, it is possible to estimate the weights of the wells by means of the curve in Figure 6, and by the construction of force diagrams to choose a power location which would permit all of the wells to be balanced on the two eccentrics.

Horsepower Calculations

So far we have spoken of the various loads in terms of "pounds of weight." Consideration will now be given to the conversion of "pounds weight" into horsepower. The fundamental definition for work states that, the measurement of the amount of work is found by taking the product of the force and the distance through which it acts. A foot-pound is defined to be the amount of work which is done when a mass of one pound is raised a distance of one foot against the action of gravity. In defining work as the force multiplied by the distance through which it acts, it is to be observed that the element of time does not enter. The same work is done in lifting a mass of 300 pounds a distance of 100 feet, whether the work is done in a day or in a minute. The same work is done whether the mass is carried at a single load or in two or more loads. The amount of work done is measured by the end result, and it does not in any way depend upon the time to do the work. In the consideration of a machine it is necessary to know more than the total amount of work which the machine can do. It is desirable to know the rate at which the machine can work. The rate of doing work is called power. Hence, power is equal to work divided by time, which in turn is equal to force times distance divided by time or work per unit of time. The English unit of power is called the horsepower. A horsepower denotes the power or ability of a machine to do 33,000 foot-pounds of work in one minute.

Suppose, for example, that a well was found by the

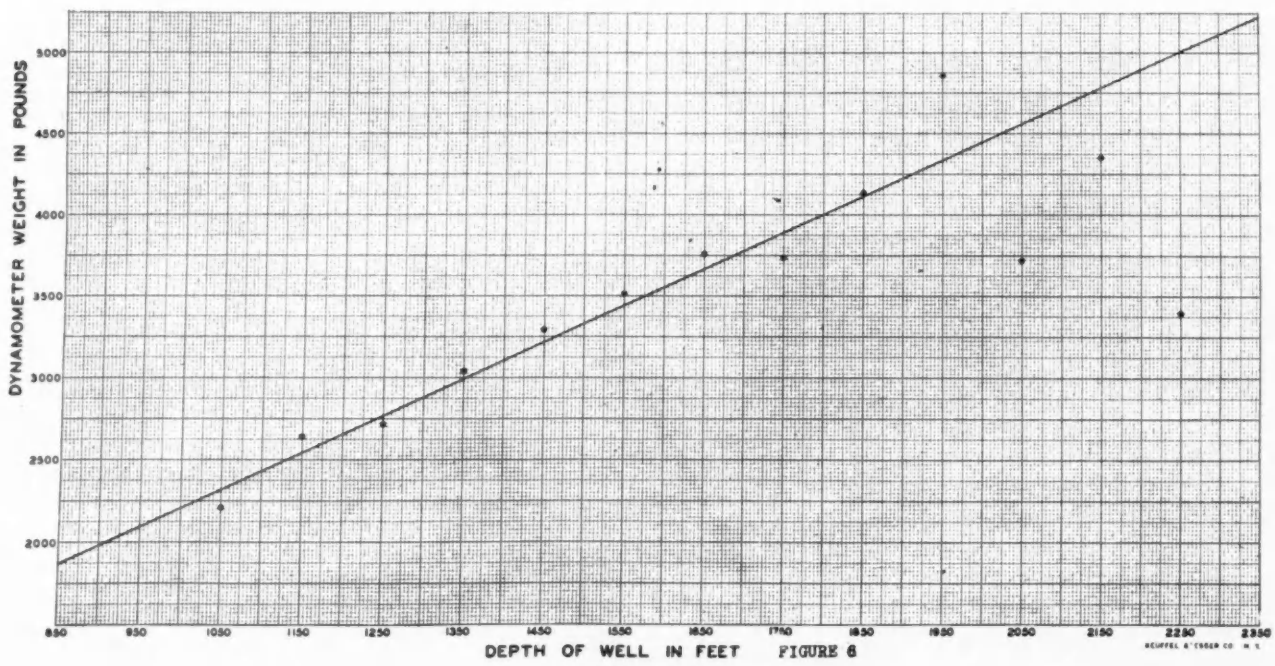


FIGURE 6

dynamometer to weigh 2000 pounds on the lifting upstroke. Assume also, that the length of stroke was 18 inches (1½ feet), then in order to lift this weight of 2000 pounds 1½ feet, there would have to be 2000 x 1.5, or 3000 foot-pounds of energy or work expended. Suppose that the well was operating at 14 strokes per minute, then in one minute's time there would be 3000 × 14, or 42,000 foot-pounds of work accomplished. Because of the fundamental definition that one horsepower is equivalent to 33,000 foot-pounds of work being expended in one minute, the horsepower necessary to pump the well would be 42,000 divided by 33,000, or 1.272.

The formula to be used, therefore, for well pumping consists of the following:

$$HP = \frac{\text{Wt. in Lbs.} \times \text{Stroke in Ft.} \times \text{Strokes per Minute}}{33{,}000}$$

No machine is 100 per cent perfect or efficient, and for this reason a factor of efficiency must be employed. The formula then becomes:

$$HP = \frac{\text{Wt. in Lbs.} \times \text{Stroke in Ft.} \times \text{Strokes per Minute}}{33{,}000 \times \text{Efficiency}}$$

The writer was unable to find published data on the over-all efficiency of bandwheel powers. Theoretically, the horsepower necessary for pumping one well would be based upon the weight of the sucker rods and the fluid within the tubing alone; actually, however, this is altered by slippage within the pump barrel, and the friction load previously discussed. The dynamometer measurement at the power gives the gross weight of a particular well with its sucker and surface rods, etc., and all of the factors contributing to inefficiency are evaluated up to that point in terms of "pounds weight." We need not be concerned further with this. The exact losses between the point of weighing just outside the power, and the primemover, however, are unknown. Probably the greatest loss within this zone is that occurring from friction between the eccentrics and eccentric rings. Joseph Reid Gas Engine Company was asked to perform some simple experiments in its shops in an effort to determine just how much horsepower alone was necessary to rotate the eccentrics within their rings for various loads. They very kindly made tests on friction in a 24-inch eccentric ring and found that it took approximately 0.5 horsepower to overcome friction for every 1000 pounds of load. These figures are theoretical and take no account of the balance on the ring. The coefficient of friction of the ring of 0.18 was established by actual experiment. It is not certain that there is a straight line relationship between friction and load for all degrees of load and the manufacturers of bandwheels can assist considerably if more experimental work is carried on.

The horsepower loads, as represented by the well weights immediately outside of Power 11, as shown in Table 2, are calculated as follows:

Load on upper eccentric.....47,680 lbs.
Load on lower eccentric.....54,185 lbs.
Strokes per minute.....14
Length of stroke.....16"

$$\frac{47{,}680 \times 14 \times 1.33}{33{,}000} = \frac{887{,}802}{33{,}000} = 26.9 \text{ HP on Upper Eccentric}$$

$$\frac{54{,}185 \times 14 \times 1.33}{33{,}000} = \frac{1{,}008{,}925}{33{,}000} = 30.5 \text{ HP on Lower Eccentric}$$

This calculation does not include the horsepower necessary to operate the bandwheel and eccentrics themselves, and if this is considered the load is almost double. With Power 11 it is only possible to pull 16 wells at a time. The average weight of each well is 2753 pounds and the 16 weigh approximately 44,048 pounds. This load gives 22,024 pounds to each eccentric which takes

$$\frac{22{,}024 \times 14 \times 1.33}{33{,}000} = 12.4 \text{ HP.}$$

The power to handle the wheel and eccentrics alone will increase the total load to approximately 25 horsepower. The prime mover at the power is a 25 horsepower gas engine.

A splendid opportunity of checking the load on a 24-foot bandwheel power was provided by Mr. Wallace Richmond of Bradford. This power was operated by a 50 horsepower 34-60 cycle, 440 volt, 860 rpm motor and the Bradford Electric Company assisted him in determining the horsepower load on the power by watt meter and other instruments. With the power operating 35 wells the motor output necessary was 45.2 horsepower, or 1.29 horsepower per well.

The writer's assistants later made a dynamometer survey of the same power and with 38 wells hooked on, the maximum load on the upper eccentric was 33,705 pounds and on the lower eccentric 28,580 pounds. The average well depth is 1200 feet; they were being operated at 14.6 strokes per minute, and the length of stroke was 24 inches. Using the load of the heaviest eccentric, the horsepower for the 38 wells was 29.82, as calculated in the usual manner; not including, of course, the losses between the outside of the power, where the wells were weighed, and the electric motor. This is an average of .784 horsepower per well. Then $\frac{.784}{1.29}$ gives 60.7 per cent, the efficiency of the bandwheel itself. Using the Reid data of 0.5 horsepower for every 1000 pounds of load, there would be 16.85 horsepower utilized in the eccentrics themselves. This gives a total of 46.67 horsepower for 38 wells, as shown by the dynamometer, or 1.22 horsepower per well against 1.29, as shown by the motor, a remarkably close check. It is believed that the 60.7 per cent figure for efficiency of the bandwheel will be representative of most installations. Considering the over-all efficiency based upon the well weight at the well, the figure is probably not over 50 per cent and in lots of cases where there are long rod lines, with numerous tie-downs, swings, etc., the over-all efficiency may be as low as 40 per cent.

Table 3, prepared by the Surface Equipment Company of Tulsa, gives the approximate horsepower necessary for pumping wells of different depth.

Factors Which Control Load

Loads on powers and the individual weights of wells may vary from time to time. As larger quantities of water are pumped, a well becomes heavier; if the jack and rod lines are not properly greased there is excessive power loss through friction. If the rods in a well are parted, the weight of the well is less, and in the same way, if there are leaky valves which permit a loss of fluid, the well may be lighter than normal. It has been found by experience, also, that the power necessary to pump a well depends to a large extent upon the way the jack has been set. More will be said concerning this later.

It is surprising what effect the proper lubrication of rod line supports has. With one well, No. L 99 on Power 11, which had a rod line 900 feet in length the wooden post rod line supports were allowed to become dry, at which time the well was weighed at the power. The dynamometer showed a load of 4950 pounds. The supports were then greased and the well weighed again, showing a load of 4400 pounds. This difference of 550 pounds was 12.5 per cent of the total well weight and in an installation where

the operator was buying fuel, dry supports would represent quite a needless waste in a year's time.

Well No. D 5 on Power 11 was also weighed before and after greasing rod line supports. This well had a shorter rod line, only 680 feet in length, supported by 24 wooden posts. Before greasing, the well weighed 3700 pounds, and 3400 immediately after lubricating the posts, a difference of 300 pounds. The extra weight occasioned by friction upon ungreased rod-line supports in these two wells represents approximately 0.46 horsepower. This conclusively shows the advantage of keeping rod line supports properly greased.

Setting of Jacks

One of the greatest power savings which can be made among a group of bandwheel power wells is possible through the correct installation of the well jacks and in seeing that the movement of the beam and bottom brace of the Oklahoma type jack is confined to the proper zone. M. C. Hammond of the Forest Oil Corporation at Bradford, was responsible for a group of field experiments, in which the dynamometer was used in determining the effect on power loads of having the jack beam and bottom brace work in different positions above and below a horizontal position. He determined that in wells located on fairly flat ground with respect to the power, there was a considerable saving in reduction of well load by having the jack beam and bottom brace rise no higher than the horizontal position on the up-stroke.

For instance, in one well where the jack had previously been installed, so that the bottom brace and beam traveled half above and half below the horizontal position on the up and down strokes, the rod line was lengthened by means of the turnbuckle at the jack, so that all movement of the bottom brace was below the horizontal. In other words, the position of the brace was in a horizontal position at the top of the stroke. Before the change was made, the well weighed 2225 pounds; after changing, the load was reduced to 2075 pounds, a difference of 150 pounds, or .09 horsepower. Assuming that the prime mover was a gas engine using 12 cubic feet of gas for every horsepower of load per hour, in one month this 150 pounds would be equivalent to 50½ cents, where gas is selling for 65 cents per thousand cubic feet, or $6.06 per year.

In another well, where the bottom brace also traveled half above and half below the horizontal position on the up and down stroke, the weight before the change was 2412 pounds. With the movement confined below the horizontal, the weight was 2262 pounds, another saving of 150 pounds. If a power pumps 30 wells, and it is possible to save 150 pounds per well through the proper adjustment of the jacks, the total weight saved would be 4500 pounds, equivalent to $181.80 in fuel cost per year. Another way of considering it would be, that 4500 pounds of weight is equivalent to approximately two wells on this particular power and that the power, generally considered as loaded up, could pump two additional wells.

Figure 7 shows an Oklahoma type jack, and to effect the

Horsepower Required Per Thousand Feet for One Well Using Two-Inch Tubing, 1¾-Inch Barrel

Stroke Inches	Strokes Per Minute 8	10	12	14	16	18	20	22	24	26	28	30
12	.25	.31	.37	.44	.50	.56	.64	.69	.76	.82	.88	.95
14	.29	.36	.43	.51	.58	.65	.74	.80	.88	.95	1.02	1.10
16	.33	.42	.50	.59	.67	.75	.84	.92	1.01	1.09	1.17	1.26
18	.37	.47	.56	.66	.75	.84	.95	1.03	1.13	1.23	1.32	1.42
20	.42	.52	.67	.73	.84	.94	1.05	1.15	1.26	1.37	1.47	1.58
22	.46	.58	.69	.81	.92	1.03	1.16	1.27	1.39	1.51	1.62	1.74
24	.50	.63	.75	.88	1.01	1.12	1.26	1.38	1.51	1.65	1.76	1.90
26	.54	.68	.82	.95	1.09	1.22	1.37	1.50	1.64	1.79	1.91	2.06
28	.59	.73	.88	1.09	1.17	1.31	1.47	1.62	1.76	1.92	2.06	2.22
30	.63	.79	.94	1.10	1.26	1.41	1.58	1.73	1.89	2.06	2.21	2.38
32	.67	.84	1.01	1.17	1.35	1.50	1.68	1.85	2.02	2.20	2.36	2.54
34	.71	.89	1.07	1.24	1.44	1.59	1.79	1.97	2.14	2.34	2.50	2.70
36	.76	.95	1.13	1.32	1.52	1.69	1.89	2.08	2.27	2.48	2.65	2.86
38	.80	1.00	1.20	1.39	1.61	1.78	1.99	2.20	2.39	2.62	2.80	3.02
40	.84	1.05	1.26	1.46	1.69	1.88	2.10	2.32	2.52	2.76	2.95	3.18
42	.88	1.11	1.33	1.54	1.77	1.97	2.20	2.43	2.65	2.89	3.10	3.33

Horsepower Required Per Thousand Feet for One Well Using 2¼-Inch Barrel, 2½-Inch Tubing

Stroke Inches	Strokes Per Minute 8	10	12	14	16	18	20	22	24	26	28	30
12	.41	.52	.63	.75	.84	.94	1.04	1.14	1.25	1.36	1.39	1.56
14	.48	.51	.73	.87	.98	1.09	1.21	1.33	1.46	1.58	1.61	1.82
16	.55	.70	.83	1.09	1.12	1.25	1.38	1.52	1.67	1.81	1.83	2.08
18	.62	.79	.93	1.11	1.26	1.40	1.55	1.71	1.88	2.03	2.05	2.34
20	.69	.88	1.03	1.23	1.40	1.56	1.73	1.90	2.09	2.26	2.44	2.60
22	.76	.96	1.13	1.35	1.54	1.72	1.90	2.09	2.30	2.49	2.68	2.87
24	.83	1.06	1.23	1.47	1.68	1.87	2.07	2.28	2.51	2.71	2.92	3.13
26	.90	1.15	1.33	1.59	1.82	2.03	2.24	2.47	2.72	2.94	3.16	3.39
28	.97	1.42	1.63	1.95	2.24	2.50	2.76	3.05	3.35	3.62	3.89	4.18
30	1.04	1.33	1.53	1.83	2.10	2.34	2.59	2.85	3.14	3.39	3.65	3.98
32	1.11	1.42	1.63	1.95	2.24	2.50	2.76	3.05	3.35	3.62	3.89	4.18
34	1.18	1.15	1.73	2.07	2.38	2.65	2.93	3.24	3.56	3.84	4.13	4.44
36	1.25	1.60	1.83	2.19	2.52	2.81	3.11	3.43	3.76	4.07	4.38	4.70
38	1.32	1.69	1.93	2.31	2.66	2.96	3.28	3.62	3.97	4.29	4.62	4.96
40	1.39	1.78	2.03	2.43	2.80	3.12	3.45	3.81	4.18	4.52	4.86	5.22
42	1.46	1.87	2.13	2.55	2.94	3.28	3.62	4.00	4.39	4.75	5.10	5.49

Horsepower Required Per Thousand Feet for One Well Using Three-Inch Tubing, 2¾-Inch Barrel

Stroke Inches	Strokes Per Minute 8	10	12	14	16	18	20	22	24	26	28	30
12	.62	.78	.94	1.09	1.25	1.41	1.56	1.72	1.88	2.02	2.26	2.34
14	.73	.91	1.09	1.27	1.46	1.64	1.79	2.00	2.18	2.35	2.62	2.73
16	.83	1.04	1.25	1.45	1.67	1.87	2.03	2.29	2.49	2.69	2.98	3.12
18	.94	1.17	1.41	1.63	1.88	2.11	2.26	2.57	2.80	3.03	3.34	3.51
20	1.04	1.30	1.56	1.81	2.09	2.34	2.50	2.85	3.11	3.37	3.70	3.90
22	1.15	1.43	1.72	2.00	2.30	2.58	2.73	3.14	3.42	3.71	4.06	4.30
24	1.25	1.56	1.88	2.18	2.51	2.81	2.97	3.42	3.72	4.05	4.42	4.69
26	1.36	1.69	2.04	2.36	2.72	3.04	3.20	3.71	4.03	4.39	4.78	5.08
28	1.46	1.82	2.19	2.54	2.93	3.28	3.44	3.99	4.34	4.72	5.14	5.47
30	1.57	1.95	2.35	2.73	3.14	3.51	3.67	4.28	4.65	5.06	5.50	5.86
32	1.67	2.08	2.51	2.91	3.35	3.75	3.91	4.56	4.96	5.40	5.86	6.26
34	1.78	2.21	2.67	3.09	3.56	3.98	4.14	4.85	5.27	5.74	6.22	6.65
36	1.88	2.34	2.82	3.27	3.77	4.21	4.38	5.13	5.57	6.08	6.58	7.04
38	1.99	2.47	2.98	3.45	3.98	4.45	4.61	5.42	5.88	6.42	6.94	7.43
40	2.09	2.60	3.14	3.64	4.19	4.68	4.85	5.70	6.19	6.76	7.30	7.82
42	2.20	2.73	3.29	3.82	4.40	4.92	5.08	5.99	6.50	7.10	7.66	8.22

TABLE 3

savings discussed, the point "A" at the end of the bottom brace should on the up-stroke not travel higher than the horizontal line "x".

Another well was located down hill from the bandwheel power, so that the rod line ran at an angle of about 23 degrees above the horizontal. The jack of this well had been set so that it pulled high, the bottom of the stroke being about four inches above the "x" line in Figure 7, and the upright lever arm parallel to the dashed line marked "incorrect position of lever arm." Under these conditions, the well weighed 4275 pounds. By adjusting the jack so

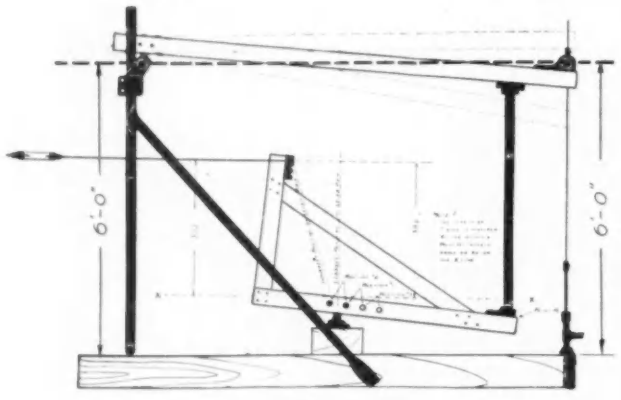


FIGURE 7

that the bottom brace would rise no higher than the horizontal position at the top of the stroke, a saving of 200 pounds was effected. By substituting a shorter brace and a longer upright, and still allowing the bottom brace movement to be one-half above and one half below the horizontal position, such as illustrated in Figure 8, where the pull line connection was brought forward to the point where the best leverage could be obtained, an incredible saving of 1525 pounds was noticed.

Where the rod line runs up hill to a well, there is no advantage gained by changing the upright or brace and it is permissible to allow the bottom brace a "half and half" travel above and below the horizontal position. The reason for this is, that the rod line already has an advantage in leverage, which did not exist in the previous wells mentioned, and which had to be gained by either changing braces or the zone of movement.

There is no mystery about the savings which can be effected by proper installation of jacks, as it is all a question of securing the most effective leverage between the rod line, the upright brace and the fulcrum or saddle. Probably a broad rule to go by would be that, at the top of the stroke the upright brace of an Oklahoma type jack should be approximately at right angles to the rod line at the jack. In order to secure this arrangement it may sometimes be necessary to change the jack foundation or lengthen the rod line by means of its turnbuckle; or in the case of wells lying down hill from the power, to shorten the brace and lengthen the upright as previously described. The individual operator will have to decide for himself which arrangement is best and the dynamometer is indispensable in carrying on this work.

If it is possible to secure the production from a well with a shorter stroke, this should be accomplished, because the horsepower load is related directly to the length of stroke. It may also be said that if the production can be gained by pumping at a slower speed, or a reduced number of strokes per minute, this should also be effected. For example, take an imaginary well which is pumping at 14 strokes per minute; the length of stroke being 14 inches and the well weighing 2000 pounds. The horsepower load under these conditions is .989. If the number of strokes per minute is kept the same, but the stroke increased to 18 inches, the load becomes 1.27. If the length of stroke is unchanged, but the number increased to 20 strokes, the load becomes 1.21 horsepower.

The National Supply Company has used a "rule of thumb" method of estimating the horsepower load of an individual well by the following factors: "With 18-inch stroke and 18 revolutions or strokes per minute, approximately one horsepower is required for each 1000-foot lift in two-inch tubing, each 650-foot lift in 2½-inch tubing or each 450-foot lift in three-inch tubing. Doubling the length of stroke or the speed doubles the power required."

Obviously, the information given above applies to the average well, and does not take into consideration any variations which might exist in the surface equipment of the well. It is therefore necessary to evaluate the difference which might be made by this surface equipment and for that reason the dynamometer is necessary.

The dynamometer work described in this paper has not touched upon comparative differences in load in the same rod line resulting from the use of different styles of rod-line support, "tie-backs," "hold-downs," "hold-ups," etc., but some comparisons have been noted between various wells differently equipped. Well D 5, pumped by Power 11, has a rod line 680 feet in length and is 625 pounds heavier than Well D 46, for the reason that its rod line carries one "tie-back" and one "tie-down" where it leads over a hill. If "tie-backs" have to be used, care should be taken to see that they are attached and supported in such a manner as to be approximately at right angles to the rod line. If they are placed at sharper angles, there is too much of a pull against the "tie-back" support.

It has been noticed that a rod line supported by swings, which allow the line in its reciprocal motion to swing back and forth as if supported by pendulums, requires less power to operate and although originally costing more than posts set in the ground, would probably pay for itself in fuel saving.

Conclusion

It is hoped that the analysis given to the bandwheel power in this paper will be of some service to the oil field

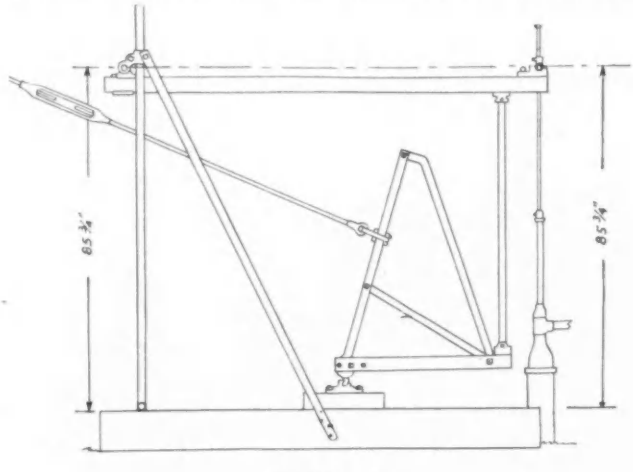
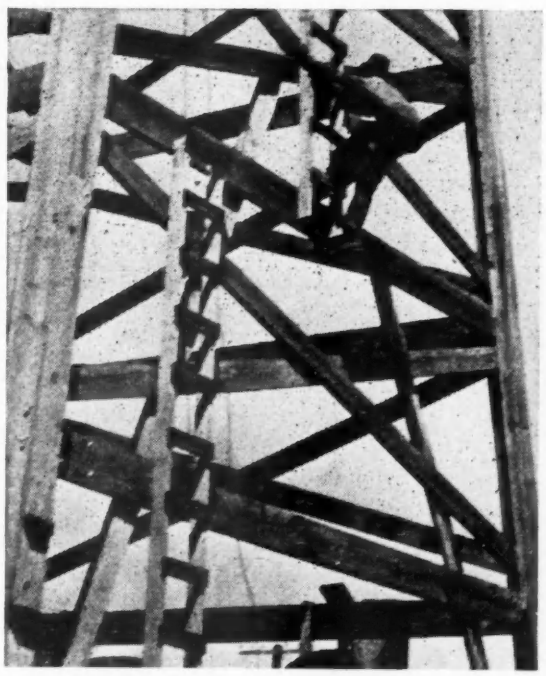


FIGURE 8

operator. There are many additional uses of the dynamometer which have not been mentioned. Due to its simple construction and readiness for use, it constitutes a valuable investment for any lease where bandwheel powers are in operation; powers may be balanced, rod lines may be properly installed and equipped, the loads carried by the engine determined and correct setting of well jacks secured through the use of this practical instrument.

FIELD HINTS . . .
from Here *and* There

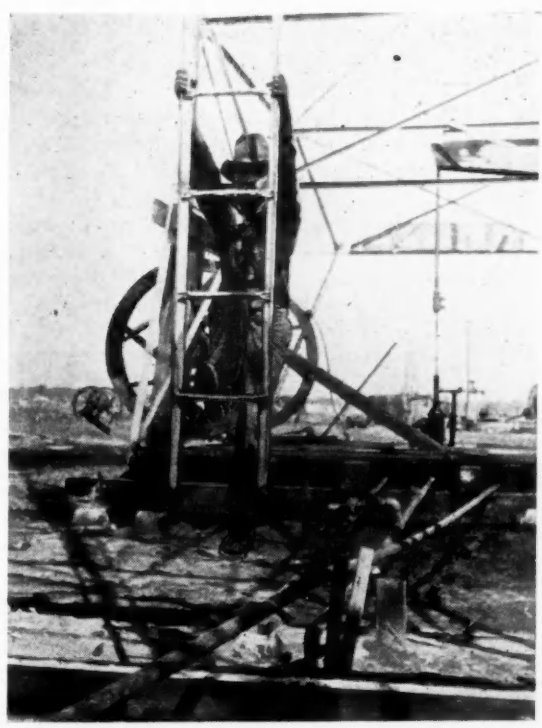
Photographs furnished by the Department of Accident Prevention, American Petroleum Institute



Offset ladders without landings are unsafe. Such a condition as shown in the picture above is becoming rare. Unfortunately, what is shown at the right below is not so rare. The ladder won't stretch and the man must. Should he hit the ground on an uneven footing, a sprained ankle may result. All ladders should have good landings. Where conditions invite accidents, accidents eventually will occur.

The tongue and spring shown in the picture below will prevent the wire line from jumping out of the hook on this pulling mast. A bad injury to a well puller when a line came unhooked caused development of this latch. After another accident, perhaps, more attention will be given to care of the line. The eye shown in the picture is not according to the best standards for such procedure.

Sometimes pumpers are better house keepers than many housewives. Pumpers who keep the property orderly seldom are injured.



CALIFORNIA FIELDS

Company Drills Two Kettleman Hills Holes 19,000 Feet Without Encouragement. Back in Deep Well to Test.

BRAD MILLS, *Staff Representative, Los Angeles, California*

Drilling Increase Has Been Modest But Important

Los Angeles.—The increase in the number of active drilling wells from 110 on April 30 to 141 on June 11 has brought California operations up to a much more satisfactory level than the average of the spring months. The increase in the number of drilling wells in both proven and wildcat districts has been modest, but the upward trend has been important. The number of permits issued by the state ran high for several weeks, but the average has been less during the past month than during the preceding month. Wildcat operations have been extended to various parts of the state, but this does not mean that all sections have shown increases. The net change in operations has been upward for about three months, and a continued improvement will witness a much larger number of drilling wells than the present total.

Major companies are considering redrilling, working over and repairing of wells in the older fields, and might even drill many more from the surface, but it will take a greater recovery than has been witnessed to cause an extended revival in the older fields.

Deepening May Revive Huntington Beach Interest

Huntington Beach, Calif.—Deepening of a number of wells to produce from the deepest known zone may help to revive interest in the Huntington Beach field, but activity along this line does not mean that extensive efforts will be made to find new deeper zones.

The Texas Company will deepen Playan 2-1 to around 4500 feet, and deepening of several offsets may result.

Most of the first activity will be along the shore line, but much of the townlot district could be included.

The upper producing zone at Huntington yields a very heavy oil, but the intermediate and lower zones produce lighter grades. The best prospect for increased drilling lies in development of the deepest known producing zone. A large number of operators would like to increase their production with a minimum expense, but where the wells have settled to a daily output above the minimum economic level, deepening will be the exception rather than the rule.

Los Angeles.—Completion by Belridge Oil Company of No. 64-27 in the North Belridge field with an initial production of 1500 barrels of 51 gravity oil and nearly 100 million cubic feet of wet gas was the most important development of the week. This well was drilled to 8060 feet and opens up an entirely new producing horizon in the base of or below the Temblor formation. The well has been shut in as a curtailment measure after a short test which was concluded Friday afternoon.

Former "Deep" Well to Get Delayed Production Test

Taft, Calif.—Failure to obtain an extension may force Standard Oil Company of California to resume operations in Mascot 1, the Midway test which was for a time the deepest well in the world at 9629 feet. After drilling to this depth and running a string of 5¾-inch casing to 9302 feet, the well was shut down without a test. The company did not make public the nature of the formation at or near the bottom of the hole, but it is believed that the top of the Temblor was reached. Mild acetone cuts would have been a favorable indication, as the top of the Temblor at Kettleman Hills shows only light cuts.

The present extension expires July 1, and refusal to grant another extension would force Standard Oil Company to continue with the test.

Hopper Canyon Production Try Shows Promise

Ventura, Calif.—H. A. Bardeen will drill to around 2700 feet and attempt to complete Lankershim 2, Hopper Canyon test which should help to show the possibilities of a crater district near Fillmore. More than 600 feet of the zone below 1500 feet has shown oil. About 100 feet of formation near the bottom of the hole has shown an unusually good oil content, and the well should make a much better producer than the first completion. The original well is pumping above 125 barrels of 31 gravity oil, with a gasoline content of 40 per cent. The immediate district has more than ordinary promise, and scattered development is possible. The intermittent strata of oil sand are among the best found in a general district which has produced oil for a generation.

Two Deep Middle Dome Wells Look Like Expensive Trys

Coalinga, Calif.—North American Oil Consolidated has been unable to make a producer of Elsinore 1, flank test on the North Dome, and the latest production test appears to have placed the well dangerously near the extreme limits of the field. This deep test was drilled to 9578 feet and swabbed to give the lower Temblor below 9135 feet a chance to produce. The fluid could not be swabbed below 1600 feet, and the constant replacement of salt water was regarded as a distinctly unfavorable development. The lower part of the formation seems to be wet, and the same trouble appeared to lower the chances of commercial production in the upper part of the zone, the first production test having shown water above 9000 feet.

The source of the water will be found and the well plugged back to test the upper part of the formation. The 4¾-inch liner may be perforated above 8500 feet. The 6⅝-inch water shutoff string was cemented at 8365 feet. Top of the Temblor near the edge of the North Dome has carried water in most wells, but there is a chance for an exception. Shell Oil Company's Dixon 1, about 1250 feet west of Elsinore 1, showed water in the top of the zone.

North American Oil Consolidated's Blauvelt 1, about 2000 feet east of Elsinore 1, is idle at 9500 feet, and it does not seem in line for successful completion. These two wells have been very expensive experiments, and all operators have been sympathetic in the undertaking. Drilling of more than 19,000 feet of hole in two wells without favorable results has been enough to discourage the average operator. Cores from below 9000 feet in Blauvelt 1, the extreme flank test, showed practically no cuts, and outright failure of Elsinore

1, the more favorably located well, should make a production test in Blauvelt all the more doubtful.

The North Dome plunges more sharply along the sides than on the ends. This has been definitely proved on the northwest flank, where some of the best completions have been outside the line drawn three years ago to define the field. Both the east and west sides of North Dome dip sharply.

North Kettleman Oil & Gas Company is drilling below 6500 feet in Lillis-Welch 1, extreme flank well on the northwest plunge of North Dome, but the Temblor is not expected above 8000 feet. The brown shale may be found as deep as 7000 feet, and this would place the top of the Temblor around 8500 feet.

Standard Oil Company got the top of the brown shale around 6600 feet in No. 19J-67, an edge test on the northwest flank, is drilling in hard shale below 7000 feet. This is an important well and will help to define the producing limits of the North Dome.

Standard Oil Company is trying to locate the source of the water in No. 6-29V, Middle Dome test which was drilled to 8385 feet to prove the intermediate Temblor wet. The top of the formation produced clean oil, but the second production test apparently included streaks of water sand.

Superior Oil Company has had trouble in landing the liner in Huffman 4, North Dome test which established a drilling record of 8600 feet in three months. The lower part will be sidetracked and the well completed at or near the original depth.

Poso Abandonment Does Not Dampen Enthusiasm

Bakersfield, Calif. — Abandonment of Gulf Verde Oil Company's Glide 1A, a wildcat test west of the Mt. Poso field, has apparently not killed the enthusiasm of other interests which have acquired the acreage on Section 19-27-28. Emrich Oil Company will drill another well on the same tract, on the theory that a better location with reference to the fault running across the district may develop something worthwhile.

The holdings involved total about 1000 acres, and there is still a chance for production on the tract. Abandonment of Glide 1A at 2460 feet does make the chances of commercial production more remote, but the original location could have been slightly out of place. Emerich Oil Company will continue operations with the equipment released by the original operators.

Before abandonment of Glide 1A, a major oil company offered to purchase an interest in the leases, but failure of the well caused the prospective purchaser to thank itself for its good fortune.

Vetnura Test Sets Packer in 80-Pound Mud for Record

Ventura, Calif.—Associated Oil Company is coring just short of 9600 feet in Lloyd 83, deep test at Ventura Avenue, and will soon make a production test from an entirely new level. Circulation of very heavy mud is necessary to handle the gas pressure which was developed below 8500 feet. Temperature tests may be made, but it is known that Ventura Avenue is a cooler field than such fields as Santa Fe Springs and Long Beach.

A new record was established recently by Associated Oil Company in Lloyd 131, when a 16-inch packer was successfully set at 4209 feet. The Lane-Wells packer was run in connection with a Johnston formation tester and was set in 80-pound mud to set the record. The dead weight against the packer after the valve was released was perhaps greater than was ever thrown against a packer under similar conditions.

California Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
FRUITVALE—		
Western Gulf Oil Co., Price-Stewart 2	1500	3935
LONG BEACH—		
Barry, et al, No. 1	50	4200
SEAL BEACH—		
Standard Oil Co., San Gabriel 12	650	6372
VENTURA COUNTY—		
Triunfo Oil Co.'s Conejo 1, 24-1-19	*	2985
VENTURA AVENUE—		
General Pet. Corp., Barnard 3A	80	5825

—NEW OPERATIONS—

BELRIDGE—Belridge Oil Co., No. 51-27, 27-27-20.

BUTTONWILLOW — Milham Exploration Co., S. P. 32-7, 7-28-23.

ROUND MOUNTAIN—C. C. M. O. Co., Coffee 1, 1-28-28.

SEAL BEACH—Continental Oil Co., Bixby 34, 3-5-12.

TEHAMA COUNTY—Valley Petroleum Association, No. 1, 27-25-4.

Wildcat Drilling Report

(Wells shut down not included)

NORTHERN CALIFORNIA

KERN COUNTY

BLACKWELL'S CORNER—Fred Fowler's Lincoln 1, 15-26-19, dr hard gray sand 2178 ft.

BUTTONWILLOW — Milham Exploration Co.'s S. P. 32-7, 7-28-23, dr shale 2235 ft; S. P. 43-7, 7-28-23, new lcn; S. P. 21-27, 17-28-23, building pipe lines to lcn. Wilshire Oil Co.'s Nordon 1A, 7-29-24, fsh for 6⅝-in cas, td 6990 ft.

DEVIL'S DEN—C. B. Gauthier's No. 1, 24-25-18, dr shale 635 ft. Thomas Hannah's No. 1, 25-25-18, dr hard sand 3325 ft.

McKITTRICK—T. H. Purman's No. 1, 22-29-21, cored to 3945 ft, repairing rig. General Pet.'s Lovitt 1, 10-30-21, new lcn, will not drill now. Welport Oil Co.'s No. 2, 19-29-21, dr gray sand 250 ft; No. 8, 19-29-21, will run combination string of small cas and cement through perforations.

SEMITROPIC — Fullerton Oil Co.'s Core Hole G-1, 1-27-22, dr shale 2515 ft.

SHALE HILLS—Rio Grande Oil Co.'s Utting 1, 7-27-19, dr shale 1818 ft.

WHEELER RIDGE—Barnsdall's K. C. L. 1, 15-11-20, surveying hole, td 7125 ft.

SANTA BARBARA COUNTY

CARPENTERIA — Texas' Community 3-1, 33-4-25, dr shale 2250 ft.

COAL OIL POINT—Bolsa Chica Oil Corp's No. 1, will redrill from about 550 ft after plugging back from 5500 ft. Equity Oil and Royalty Co.'s No. 1, co above plug at 1850 ft, td 2210 ft.

GOLETA—General Pet.'s More 1, 21-4-28, redrilling 3800 ft, former depth 4533 ft.

LOS ALMOS—Barnsdall's Careaga 1, 31-8-33, dr shale 4775 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr hard brown shale 9650 ft.

SANTA ROSA ISLAND—Standard's No. 1, ready to sp.

VENTURA COUNTY

CONEJO—American Oil Co.'s Powell 1, 33-2-20, dr rock 1710 ft.

HOPPER CANYON — Bardeen Pet. Co.'s Lankershim 2, 13-4-19, dr shale 2660 ft, will drill to 2700 ft and test streaks of oil sand.

OJAI—A. N. Macrate's Reva-Cosmon 1, 27-4-23, rigging up rotary.

OXNARD—Magu Syn.'s Utt 1, 17-1-21, repairing equipment, td 5810 ft.

PIRU—Torrey-Ventura Oil Co.'s No. 1, 32-4-18, dr red sand 3300 ft.

RINCON—Woodrow Oil Co.'s Woodrow 1, 4-3-24, dr shale 2700 ft.

SESPE—Harmon and Deal's No. 1, 33-5-19, building roads to new lcn.

SULPHUR MOUNTAIN — Wilshire Annex Oil Co.'s Thompson 1, 20-4-21, bldg roads to new lcn.

TIMBER CANYON—Superior's West 3, 13-4-21, new lcn.

MISCELLANEOUS

KINGS COUNTY—Kettleman Reef Ridge Oil Co.'s Seymour 1, 10-23-16, co 1150 ft; Seymour 2, 10-23-16, new lcn. Knudsen and Schmidt's Avenal 1, 36-23-17, co 5640 ft. Eagle Oil & Gas Co.'s No. 2, 15-23-20, dr shale 1038 ft. Local Natural Gas Co.'s No. 1, 32-22-20, dr 400 ft. Scott Brothers Well Drilling Co.'s No. 1, 18-22-19, dr gray sand 1326 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, will cmt 6¼-in cas at 1860 ft, td 2340 ft.

SAN LUIS OBISPO COUNTY — Emerich Oil Co.'s Holland 1, 22-32-22, co 1415 ft. Kent and McDonald's No. 1, 3-32-22, redrilling 1000 ft. J. D. Martin's No. 3, 5-31-13, dr shale 235 ft.

SANTA CLARA COUNTY—C. H. Shaw's No. 1, 36-11-3, lcn.

STANISLAUS COUNTY—Rushin Oil and Dev. Co.'s No. 1, 20-3-12, dr shale 2575 ft.

TULARE COUNTY — Gravity Exploration Co.'s Hudson-Buck 1, 11-24-23, fsh 2210 ft. Kingsburg Exploration Co.'s Muller 1, 29-16-23, dr gray sand 2915 ft.

YOLO COUNTY—Pacific Northern Gas and Oil Co.'s Guinda 1, 23-12-3, depth withheld.

SOUTHERN CALIFORNIA

BUENA PARK—Buena Park Oil and Dev. Co.'s Iangstaff 1, 34-3-11, lcn.

FULLERTON—Orange Thorpe Corp.'s Skinner 1, 32-3-10, dr shale 2655 ft.

HASLEY CANYON—W. W. Stabler's No. 1, 32-5-17, will deepen from 3212 ft.

HERMOSA BEACH—Tulsa Oil Co.'s Hermosa 2, 6-4-14, co 3140 ft.

NEWHALL—W. T. Ball's No. 1, 34-3-16, dr shale 1522 ft. Spencer and Brubaker's No. 1A, 8-3-16, rigging portable outfit. Southern California Drilling Co.'s No. 2-1, 13-3-16, dr shale 1115 ft. Superba Pet. Corp.'s No. 1, 11-3-16, will drill from 110 ft.

NEWPORT—Nuoil Co.'s Banning 2, 29-6-10, will deepen from 1975 ft.

PLAYA DEL REY—Cooperative Pet. Dev. Co.'s No. 1, 26-2-15, will deepen from 1520 ft.

PUENTE HILLS—Eldorado Oil Co.'s Baird 1, 30-2-9, fsh for tubing 2865 ft.

WILMINGTON—Walter I. Barcus' Lupie 1, 28-4-13, rig.

OKLAHOMA FIELDS

Noticeable Increase in Wildcat Drilling Throughout Mid-Continent. Oklahoma City Wells Have Strong Flow.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Wildcat Drilling Increase Offsets Old Field Decline

Tulsa.—Activity in the older areas of eastern Oklahoma and eastern Kansas has led the Mid-Continent for several months and the rate of increase has been large enough to more than offset the decline of drilling in flush pools. During the past week 47 first reports came out of the two states. Of this number 30 were in Oklahoma and 17 in Kansas. In Oklahoma, Creek County led with 10 first reports, Pottawatomie County was second with 5, Hughes County had three, Carter, Oklahoma, Okmulgee, and Creek had two each, and Seminole, Wagoner, and Jefferson had one each. Although McPherson County led in total new work in Kansas with six first reports, Cowley, Butler, Greenwood, and Woodson, all eastern counties, had a total of seven new starts, only one less than the total for all western counties. This trend of development has been due largely to the activities of smaller companies and individuals who are able to secure outlets and can afford to drill the areas because of shallower sands and correspondingly lesser drilling costs. Much of the drilling in northeastern Oklahoma during the past few months has been in deepening old producers. However, several of the more important completions have been new holes from top to bottom.

Several interesting wildcat tests were announced during the week. W. H. Atkinson announced location for Smith 1, NW SE NE Section 33-19n-8e, approximately midway between the Manford and Cushing pools and slightly over two miles southeast of the nearest production. Although not a wildcat, Anderson and Barger's Drumright 12, an old well to be drilled deeper in NE NW SW Section 5-17n-7e, should prove interesting. It is located in the Drumright townsite.

New Kansas Wildcats

Three new wildcat tests were announced an the report of last week. Smith, ash et al made location for Shepard 1, SE SE NE Section 14-18s-14e, approximately nine miles northwest of Great Bend in central western Barton County. Nearest production is about 11 miles west in the new Rush County gas area. Morgan et al's Andrews 1, NEc SW Section 3-17s-8w, is a wildcat located about 10 miles south of the town of Ellsworth in southern Ellsworth County and about 10 miles east of production in the Holyrood area. It is four locations east and three north of Shamrock Oil Company's Hysell 1, SEc Section 4-17s-8w, which was a dry hole in 1917 at 2505 feet. Skelton et al's Mallard 1, SWc SE Section 12-12s-15w, is a new wildcat location about six miles southeast of the town of Fairport in western Russell County. Nearest production is in the Fairport pool approximately five miles away.

This increases the list of active wildcat locations and drilling wells to 28, a surprisingly large number considering the fact that every effort is being made to curtail drilling in all Mid-Continent areas.

Sand Settling in Casing Presents Unusual Problem

Oklahoma City.—Phillips Petroleum Company's Houston 1, SWc NW SE NE Section 3-11n-3w, in the Walnut Grove Addition of the Oklahoma City pool, demonstrated another one of the unusual features which have confronted operators in that area. Completed May 4, the well made 6027 barrels in three hours flowing through a 4½-inch choke. Production is coming from 129 feet of Wilcox sand topped at 6295 feet. The well made large quantities of sand initially and the last production report shows that it was flowing at the rate of about 2500 barrels of oil an hour and still making seven or eight per cent sand. Opened this week it failed to flow, much to the surprise of the operators. The well has a measured bottom hole pressure in excess of 2000 pounds.

The company has located a sand plug approximately 85 feet up into the casing, apparently formed by sand which had been in the flow stream when the well was last on production. The master gates are reported to have been leaking some gas and it is believed that enough gas leaked out of the fluid during the shut in period to somewhat deaden the oil and thereby exert a greater hydrostatic pressure on the sand which had accumulated perhaps for several hundred feet up into the casing. With a continued pressure from the fluid column it seems logical to assume that the sand would be packed tighter so that eventually a fairly solid plug would be formed. This apparently is what has happened. Enough gas is now coming through that it probably would be possible with a little maneuvering to make the well flow. However, should the plug suddenly become dislodged it is certain that all surface connections would be blown off and the derrick probably would go along with them. To avoid this possibility operators are going in through a lubricator with a cutting tool and bailer and remove the plug with the well under control.

Practically all of the wells in this vicinity have been bad sand producers. It has been observed that wells which make considerable amounts of sand increase their production during the first few times opened and that initial production for the first 24 hours is not truly representative of the well capacity. Houston 1 was originally estimated at 48,216 barrels on the basis of a three-hour gauge. When it is again reconditioned it probably will be rated at close to 60,000 barrels.

Oklahoma City Wells Too Lively for Gauging

Oklahoma City.—Unruly wells prevented several initial gauges during the past week in the Oklahoma City pool. Indian Territory Illuminating Oil Company and Phillips Petroleum Company reopened M. K. & T. B-2, NE SE SE SE Section 34-12n-3w, in the northern portion of the pool, but it started cutting out connections for the second time and had to be shut in. Total depth is 6369 feet in Wilcox sand. Indian Territory Illuminating Oil Company's M. K. & T. 7, NW SW SW Section 35-12n-3w, produced an

estimated 500 barrels in one hour but damaged connections and had to be shut in. Seven-inch casing is set near the top of the Wilcox sand at 6241 feet and total depth is 6363 feet. The third apparently gusher class well was American Oil & Refining Company's Whitfield 1, SE SE NE SE Section 34-12n-3w, which overloaded separators and had to be shut in without testing. It is estimated at 50,000 barrels of oil and 100,000 cubic feet of gas. This is one of the few remaining wells which will have nine-inch casing set near top of the Wilcox sand. Total depth is 6412 feet with nine-inch set at 6262 feet.

Phillips Petroleum Company was milling on bailer lost two weeks ago when trying to complete Rock Island 1, SW NW SW Section 35-12n-3w. Nine-inch is set at 6235 feet and total depth is 6364 feet. Jacobs Oil Corporation's Sinopoulo 1, SW NE SE Section 34-12n-3w, produced 2210 barrels in 1½ hours from 6479 feet. Six-inch casing is set at 6276 feet. This well was partly cleaned out and shut in in May, and is now eligible for production after having completed its 65-day shut down period required under proration regulations.

Oklahoma Field Developments

Completions

Company, Well and Location—	Initial Production Bbls.	Depth
CLEVELAND COUNTY—		
Continental, V. Sudik 2, ne nw ne 6-10-2w	¶30-60	6720
CREEK COUNTY—		
Wise & Archer, Cruel 1-A, swc nw se 36-17-11e	*	2685
JEFFERSON COUNTY—		
O. V. Beck, Seay 1, sw ne sw 34-6-5w	25	1574
MUSKOGEE COUNTY—		
P. Boyle, Barnett 1, nw sw ne 35-16-15e	*	1230
OKLAHOMA COUNTY—		
Pace Petroleum, Iowa Addn. 1, sw nw sw sw 2-11-3w	*	4965
Slick-Urschel, Frisco 4, nwc se 3-11-3w	¶8-1953	6375
OKMULGEE COUNTY—		
Simons, Adams 1-A, se c ne nw, 21-14-11e	30	2962
Selby, Stevens 7, (twin) nw sw nw 10-14-14e	*	1495
J. Wallace, Colbert 8 sw nw nw 14-14-14e	5	1109
POTTAWATOMIE COUNTY—		
Gypsy, Bruno 2, ne c nw, 25-7-4e, (owdd)	44	4604
PONTOTOC COUNTY—		
Stanolind, Roberts 3, nw sw ne 32-5-5w	120	2525
Pioneer Petroleum, Byrne 1, se sw sw 16-5-6e	16	1785
PAWNEE COUNTY—		
Young et al, Purcell 1-A, csl ne nw 34-21-8e	15	1721
SEMINOLE COUNTY—		
Empire, Davis 1-A, nw se ne 30-7-4e	242	3054
Empire, Brown 5, sw ne se 3-8-5e	245	4186
Superior, Grisso 3, nw ne nw 35-9-6e, (owdd)	25	4220
WAGONER COUNTY—		
J. E. Sewell, Adkins 3, csl nw se 13-17-15e	*	1027
Sheridan, Snake 2, csl se nw 26-18-15e	50	1068

New Operations

BLAINE COUNTY — Watonga Pet. Co., Masters 1, sw nw nw 27-16-11w (owdd).

CARTER COUNTY—Jess Russell, Ratliff 1-A, ne nw sw 19-1s-3w. Kanaco Oil, Richards 3-A, ne se nw 25-4s-3w.

CREEK COUNTY — Anderson & Barger, Drumright 12, (owdd), ne nw sw 5-17-7e. W. H. Atkinson, Smith 1, nw se ne 33-19-8e. A. W. Swift, Ford 1-A, nwc ne nw 10-19-9e. Dean et al, Ard 1, se c nw 16-19-9e. Bailey et al, Lewis 1, ne sw sw 18-19-9e. Irelan, Bible 2, se nw sw 20-19-9e. Robinson et al, Davis 3, nw sw nw 21-19-9e. Gled Oil Co., Boyd 2, se ne nw 29-19-9e. Anthony, Warlecy 1, se c, 4-16-12e. Murta-Sherry-Carter, Mills 1A, nw se se 6-16-12e.

HUGHES COUNTY — Mid-Continent Pet., Jacobs 1, nw ne se 9-7-8e. Mahannon, Narcome 1, nwc sw 10-7-8e. Iglehart, Adam 1, se c sw 31-9-9e.

JEFFERSON COUNTY—O. V. Beck, Seay 7, nw sw se 34-6s-5w.

OKLAHOMA COUNTY — Harold-Davis, Stanley 1, se sw se 22-11-3w. Shields Petroleum, Thomas 1, swc se 22-11-3w.

OKMULGEE COUNTY—Castleman, Thomas 6, sw sw se 23-14-14e. Appleby et al, Anderson 1-A, nw se ne 3-15-14e.

POTTAWATOMIE COUNTY — Mid-Continent, Archer 4, se c 14-6-3e. Gypsy, Horn 6, ne c 23-6-3e. Plains Drilling Co., Hudson 1, sw ne sw 24-6-4e. Mid-Continent Pet., Schrader 1, nwc ne 6-6-5e. Hilton Phillips, Moore 1, swc se 21-7-4e.

SEMINOLE COUNTY—Gypsy, Pompey 2, se c nw, 29-9-6e.

STEPHENS COUNTY—George Pace, Watkins 13, se ne ne se 21-2s-7w. Pace, Watkins 14, nec se 21-2s-7w.

WAGONER COUNTY—J. Martin, Drew 3, cnl ne sw 26-18-5e.

FURTHER EVIDENCE of McEVOY LEADERSHIP

PAT. APPLIED FOR

Introducing the

McEVOY UNIVERSAL TYPE "J" TUBING HEAD

"SLIP SUSPENSION IS SAFE SUSPENSION"

This head is a modification of the very popular McEvoy Type "C" Head. **It was designed to meet the demand of a lower priced slip suspension head that was interchangeable with the standard McEvoy line of equipment:** i. e., blowout preventers, slips, oil savers, and McEvoy equipment for running tubing under pressure.

Sealing between the stuffing box and body is obtained by hydraulic packing in the bowl. The hold down cap forces the stuffing box to sealing engagement with greater force than can be obtained with a flange. Standard test of this head is 2000 lbs. cold water pressure, but for those who want to be shown, we will test it to higher pressure.

Thus, it is seen that this head is ideally suited for most any oil producing area in Texas; therefore, **it has a high salvage value** for it can be moved to most any other section. The tubing head body and hold down ring are the same as on the McEvoy Type "G" Head.

Surely such design must be of tremendous value. Slip Suspension is Safe Suspension. See us or your supply house for full information.

J. H. McEVOY & COMPANY

Established 1906

TEXAS AVENUE AND MILBY STREET HOUSTON, TEXAS

Seminole Had 1000 More For Dinner than Expected

Seminole, Okla. — Oil men gathered from practically every oil community in Oklahoma Tuesday evening, June 14, when the Seminole Chamber of Commerce staged its ninth oil men's stag dinner and show. Heretofore the affair has been exclusively for oil men of the Seminole district and members of the Seminole Chamber of Commerce. This time invitations were sent to other areas. The result was that approximately 3000 were in attendance whereas not more than 2000 had been expected. That the committees functioned well was evidenced by the fact that the extra number were taken care of in great style.

C. W. Johnston acted as general chairman of the 17 committees which handled details of the arrangements. Dr. Claude S. Chambers, was toastmaster and B. O. Hindman gave the address of welcome. Roy C. Griffin, secretary of the Seminole Chamber of Commerce, acted as general secretary and treasurer.

After an excellent dinner a card of 48 rounds of boxing was presented, which along with other features, made a most enjoyable evening.

New Sacred Heart Offset Not Looking Attractive

Seminole, Okla. — Amerada Petroleum Corporation's Mitchell 1, NE NE NE Section 3-6n-4e, southwest offset to the discovery well in the new Sacred Heart area, was not looking so good during the past week when it was reported to have made only 270 barrels of oil and 150 barrels of water in 14 hours on gas lift. Pure Oil Company's Tucker 1, SE SE SE Section 34-7n-4e, west offset to the discovery well, made 1160 barrels in 18 hours natural flow.

Followers of Seminole activity are wondering in which direction the new West Konawa production will be extended since failure of Arrow Drilling Company et al's Noble 1, NE SE SE Section 26-6n-4e, to find production in the upper Simpson formation. The test was drilled to 3810 feet where it had a show of water believed to be from the Wilcox sand. It is now shut down waiting on cement to set after plugging back to 2940 feet to test a show of oil. The test is situated four locations west and three south of the discovery well, which is the only producer.

KANSAS FIELDS

Less Demand for Kansas Oil Leaves Fields Without Market; in Some Fields Production Stored for Producer.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Lines Store Producers Oil When Purchases Are Cut

El Dorado Kansas—Effectiive June 10, Skelly Oil Company inaugurated two plans under which it will purchase from all leases served by its pipe line system in Kansas outside of the areas under proration by orders of the Public Service Commission.

Under the first plan it will run all the oil produced from each lease but will purchase and pay for only 75 per cent of the runs. The remaining 25 per cent will be run to storage at El Dorado, and held for the operator's account.

Under the second plan it will purchase and pay for 75 per cent of the daily average production from each lease as determined and shown by the daily average of its runs during May, 1932. Under the first plan the company agrees to purchase the stored oil within 12 months succeeding June 10, 1932, at the posted price of Skelly Oil Company prevailing on the date of purchase in the field from which the oil was produced and applicable to oil of like kind and quality. Such purchase may be made of the whole or any part of the stored oil at any time or from time to time within the 12-month period. Operators will have the right at any time to sell any part of the stored oil but in the event of such sale a charge of 10 cents per barrel will be made. This charge is for handling and redelivering. The oil to be redelivered will be subject to mixture with other oil and adjustments made for gravity. In the event that the company purchases the oil held in storage, no charge will be made for gathering and storage.

In explaining its action the company issued the following statement:

"The above action is necessary to bring our daily field runs and purchases into line with our current requirements of crude for our refinery. With the generally accepted belief that there will be a sharp reduction in the consumption of refined products throughout the country during the balance of the year, we are compelled to take steps to reduce our crude inventories and daily field purchases. We are hopeful that the general situation will improve shortly and that the restriction announced herein will prove to be of a temporary nature."

Similar action was recently taken by White Eagle Oil Corporation, except that it is purchasing 50 per cent and running the remainder to storage with a 12 months option to buy. It is further understood that charges are to be made on stored oil. Other purchasers in unprorated areas are likely to follow the lead of these companies, as there are many who believe it unfair to place the entire proration burden on flush and semi-flush pools. Several attempts have been made to curtail production in the settled areas through cooperative agreements among producers. This having failed, it seems that purchasing companies probably will put through a restriction plan which will reduce production in these areas from 25 to 50 per cent below its present level.

Voshell Extension Well Not Up to Promised Production

Wichita, Kansas.—Mid-Kansas Oil & Gas Company's Sperling 1, NW NW NE Section 28-21s-3w, reported last week as a possible 1000 to 3000 barrels extension to the Voshell pool, produced 122 barrels in 1½ hours and was showing a trace of water, the source of which had not been determined. Production is coming from chat between 3136 and 3144 feet, the total depth. Top of the chat horizon was logged at 3086 feet.

Phillips Petroleum Company's Smeltzer 1, CSW SE Section 21-19s-1w, approximately three quarters of a mile southeast of production in the Canton sector of the Ritz-Decker-Garrett pool in McPherson County, has a hole full of water in Wilcox sand from 3495 to 3498 feet. It probably will be plugged back by stages to test upper showings and may make a small gas well in the chat horizon. It is one of the few Wilcox sand tests in the area.

Barton-Ellsworth Arch Area

Aylward et al's Stratman 5, SW SE SE Section 1-17s-10w, in the Stratman pool of southwestern Ellsworth County, was swabbing at the rate of about 50 barrels per hour from Arbuckle "Siliceous" lime at 3238 to 3245 feet. No increase was secured from 3245 feet to the total depth at 3249 feet. Eight-inch casing is set at 3235 feet.

Midwest Refining Company's No. 6,

NWc Section 6-23s-11w, had top of the Arbuckle lime at 3533 feet and first pay from that depth to 3549 feet, where it went into a two-foot shale break. Second pay was reported from 3562 to 3570 feet, where it swabbed 163 barrels in three hours.

Six Central Kansas Pools Deprived of Market Outlet

Wichita, Kans.—Withdrawal of Stanolind Crude Oil Purchasing Company as a purchaser in the Barton-Ellsworth Arch area of central western Kansas leaves six pools in that district without an outlet and chances for a market within the near future now look rather dim. The pools affected are Stoltenberg, Heiken, Sharpe, Greenwalt, Richardson, and a portion of Stratman.

Stanolind Crude Oil Purchasing Company announced that the action was forced due to general reduction in demand. It seems possible however, that in addition to this reason the move may have been made to curtail further drilling at this time. At the time the company entered the area several one-well pools had been shut in for many months due to lack of market but immediately upon securing an outlet, operators increased drilling until a minor boom was in sight. From results so far obtained it appears that a large number of small pools will be discovered in the area but apparently the chances for production of a size which could seriously threaten the market structure are slim.

Wichita, Kansas. — McBride Incorporated's Frieson 1, NW NW SW Section 20-22s-3w, had Hunton limestone from 3505 to 3513 feet from which depth it produced 120 barrels the first 30 minutes. It is located one half mile west and one location south of Frank Hollow et al's Fee 1, which was completed February 10, as the first Hunton limestone producer in the state. Top of the Hunton here was 3507 feet and with a penetration of only 10 feet produced about 70 barrels an hour.

Kansas Field Developments

Completions

Company, Well and Location—	Initial Production Bbls.	Depth
CHASE COUNTY—		
Smith-Polhamus, Loody 5, se sw nw 36-22-9e	100	2478
GREENWOOD COUNTY—		
York State, Hatton 1, ne c sw 15-23-11e	*	2010
Harwood Oil, Beal 4, nw ne se 28-23-11e	*	1990
Harwood, Cardon 3, sw nw se 33-23-11e	204	2010
McGinnes et al, Peoples 4, ne sw ne 33-23-11e	*	2019
York State, Curry 1, ne nw ne 14-23-11e, lcn. abn.		
KINGMAN COUNTY—		
Skelly, N. Miles 1, se cor 19-27-10w	¶4-165	3496
SEDGWICK COUNTY—		
A. M. Scroggin, Wells 1, se sw ne 4-28-1e	*	3100
WOODSON COUNTY—		
Cross et al, L, cnl nw sw 14-25-13e	100	1503

New Operations

BARTON COUNTY—Smith & Ash et al, Shepard 1, se se ne 14-18-14w.

BUTLER COUNTY—Flint Hills Oil, Martin 4, sw ne sw 27-28-4e.

COWLEY COUNTY—Roth & Faurot, Holt 5, ne sw se 12-32-4e. Davis et al, Holt 1, nw sw ne, 22-32-4e, formerly listed as se sw ne. George Hinkle, Townsite 1, se sw se 22-32-4e. McMarow, Gaymon 1, ne sw ne 27-32-4e. Roth et al, Southwestern College 4, ne sw se 22-32-4e.

ELLSWORTH COUNTY — Morgan et al, Andrews 1, ne c sw, 3-17-8w.

GREENWOOD COUNTY—Federal Oil, Dalton 1, cwl sw nw 5-24-13e.

McPHERSON COUNTY—Darby Petroleum Fletcher 1, swc 16-19-1w (owd). Darby Pet., Kaegi 1A, nec 20-19-1w (owd). Smith & Ash, Kaegi 1, nwc 21-19-12 west. Shawver-Shell, Lively 3, se nw nw 21-19-1w. Boyle et al, Smith 2, ne nw nw 29-19-1w. United Petroleum, Smith 1, nw ne nw 29-19-1w, formerly listed as Miller et al, Smith 1. W. C. McBride, Newfeldt 1, ne c nw 28-21-3w.

RUSSELL COUNTY—Skelton et al, Mallard 1, swc se 12-12s-15w.

WOODSON COUNTY—Moore et al, Berry 1, nw sw nw 26-23-13e.

LARKIN
Fabric Bakelite Floats

Increase Speed and Efficiency!

Shock resistant! Strong! Tough! Fabric Bakelite is not brittle and will not crack, fracture or break by coming in contact with any obstruction in the hole. Under actual compressive tests this guide held a pressure 49% greater than that of the concrete guide.

All guides and valves are provided with large water channels and by-passes at the upper end to provide for circulation in case the main channel becomes clogged or obstructed.

All 5-3/16", 6⅝" and 7" shoes are given a 2000 lb. hydraulic test per square inch. Other sizes are given the same test as the seamless steel casing on which it is used.

Sold by leading Supply Stores

Get the complete story of Larkin Fabric Bakelite by asking for a copy of our latest catalog.

LARKIN PACKER COMPANY

ST. LOUIS, MO. OKLAHOMA CITY, OKLA.

Also Warehouse Stocks at Willow Springs

EAST CENTRAL TEXAS

More Pumpers and Salt Water Wells Show Up in Center and East Edge of Field. Another Injunction Filed.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Extension Opens Up 3500 Feet of Doubtful Territory

Tyler, Texas.—A number of leases on the west flank of the north end of the East Texas field heretofore considered doubtful for production were thrown open for development by completion of Faith Oil Corporation's E. H. Brawley 1, making 65 barrels of pipe line oil per hour via open tubing from regular sand at 3644-51 feet. This outpost is about 3500 feet northwest of the nearest production, and will result in several score new wells being drilled on leases lying in between it and former completions. Brawley 1 is located in the southeast corner of the lower 180-acre lease, J. Crouch Survey, Upshur County. Corrected depth measurement places the bottom of the hole at 3310 feet below sea level. This is the most important acreage addition to the proven area in several months, and serves to offset shrinkages sustained by the field through adverse developments at other points during the same period.

Completion of an average of about 20 big flowing wells daily is a routine affair in the East Texas field, with no particular importance attached to same because of production being automatically cut to only 51 barrels daily, but the operators are eyeing with interest the steady growth in the water wells and greater number of completions that fall short in flowing their allowable. In the past these exceptional wells have been somewhat few, and mostly on doubtful locations. A greater area is now contributing to the list of "weak" wells, as if some of the usual punch is being dissipated to a noticeable degree in sections of the field, but is not yet apparent in that portion of the structure offering a thick sand body and well above the water level.

Appearance of salt water for the first time on the extreme southwest edge of the Joiner section of the field in two recent completions on Sinclair Prairie Oil Company's Allen Kersh lease, E. B. Foulks Survey, has resulted in the latter halting work on three other tests on the lease. Kersh 2 showed 23 per cent cut oil when given a flowing test through open tubing from sand at 3653-56 feet, or 3315 feet below sea level. It was completed June 5, and began cutting soon after going on regular production. Pinching of the flow to 51 barrels daily has resulted in the amount of cut oil being reduced to less than one per cent. Kersh 1, which was completed about May 21 in sand at 3653-64 feet, or at the same subsea depth as Kersh 2, is showing a trace of cut oil, but accurate check has not been made public. Kersh 1 is one of a group of recent completions in which the company has experienced crooked holes, and necessitated the running of 4¾-inch pipe when the six-inch could not be lowered below 1000 feet. Appearance of water in these two tests will put a crimp in proposed developments on nearby leases by others.

A group of old completions on the west flank of the Kilgore area, Gregg County, were added to the list of wells making water since the first of June. Jas. B. Hughes-W. M. Pollock et al's A. A. King 1, M. Tennison Survey, is reported to be cutting two per cent at a sub-sea depth of 3311 feet, and the south offset held by Central Commercial Oil Company's King-Shell 1 is making a similar amount of b.s. and w. Welch & Sandler's R. W. Barnett-Tidal 1, T. Johnson Survey, is credited with making one per cent b.s. and w. with the hole bottomed at 3321 feet below sea level. W. L. Deininger's (Moore-Zilky-McMahon & McCullough) C. G. Strong-Kirby 1, I. Baity Survey, is making five per cent b.s. and w. within less than a month after completion from sand at 3765-77 feet. Louis Sikes et el's F. E. Stancil 1, northeast of Gladewater, is reported to be making four per cent b.s. and w. at a sub-sea depth of 3312 feet.

More Pumpers

Pumping equipment requirements have been stimulated slightly by lack of flowing pressure on completions last week along the east flank of the field. Golding-Murchison Oil Company's (American Liberty Oil Company) Strickland 1-B, located on 103-acre lease, M. V. Pena Survey, Joiner area, swabbed 30 barrels of oil in five hours from broken sand and shale at 3570-3672 feet, and will be pumped. Sun Oil Company's Ellen Till 1, located in the same area and completed May 25, has postponed the pumping stage by the installation of a 3/32-inch bottom hole choke on two-inch tubing, and flows its allowable in about 13 hours. Sinclair Prairie Oil Company's W. W. Holland 10, Ximines Survey, swabbed 10 barrels oil per hour via tubing, and must be pumped. The same company's J. E. Lawther 8, M. Garrett Survey, Gregg County, failed to flow when tested in broken sand at 3536-54 feet, with shale to 3659 feet, and probably will be a pumper. Two light wells appeared in the M. V. Winkle Survey, near Kilgore, including T. J. Tucker et al's Mary Rufus 1, which was completed pumping seven barrels per hour. Navarro Oil Company's E. G. Green 2, located on 23-acre lease, flowed by heads upon completion, and is to install a bottom hole choke. Broken oil sand was logged at 3500-28 feet, then shale to 3600 feet.

Sun Oil Company's J. C. Gray 7, northeast corner of 101-acre lease, D. Sanches Survey, failed to kick off when tested via combination string of 1, 1½ and 2-inch taper tubing, which is standard type on all the company's new completions, and also refused to flow when swabbed and oil circulated in the hole. Broken sand was logged at 3609-50 feet. All other nearby producers registered large flows upon completion, and a tight sand condition is probably responsible for the absence of natural flow in Gray 7.

In the Overton townsite area, Butler & Calhoun's C. C. Lowe 1, W. G. Tutt Survey, tested 99 per cent water in sand at 3842-52 feet, and has been ordered plugged.

A minor extension to the productive limits of the Joiner area in Cherokee County is promised by C. L. Tubbs et al's J. H. Sharp (three-acre) 1, M. D. L. S. Coy Survey, as this outpost cored at 3717-22 feet, and the last foot showed saturated oil sand, placing the pay at 3318 feet below sea level.

Discarding of leases and completed wells making, or in danger of developing bottom hole water, continues to be the policy of Humble Oil & Refining Company, which ranks second to Shell Petroleum Corporation in "farming out" edge leases to independents for oil payments and over-riding royalties. The former turned its J. T. Jones 1, a producer with a sub-sea depth of 3314 feet, and six and a fraction acres around it to Pine Lodge Oil Company (Josey Interests), Houston, for $4000 cash, and an additional $18,000 payable from one-fourth of the first seven-eighths flowing production, and from one-eighth interest in the production

when pumped. The balance of the Jones lease had previously been turned to Lester & Duffield for a $750 per acre oil payment. Humble Oil & Refining Company's D. C. Shelton 1, a light producer in the East Mountain area that has been making water, with a sub-sea depth of 3316 feet, was turned to C. L. Brown and associates for $22,000 payable out of oil. The latter deal included only 3.69 acres around the well, with the remainder of the 19½-acre lease reverting back to the royalty owners. Both wells are in the Wm. King Survey, Upshur County. Shell Petroleum Corporation turned its C. N. Dickerson 90-acre lease, T. J. Martin Survey, Rusk County, to J. L. Collins and R. L. Wheelock for a quarter over-riding royalty interest.

Commission Secures Another Injunction

Austin, Texas.—Restraining orders against a group of East Texas independent operators from violating the proration rules of the Texas Railroad Commission were granted here during the past week in the Ninety-Eighth District Court upon the application of the Attoreny General. Clint W. Murchison, Dudley S. Golding and C. M. Johnson, Dallas, were designated in an injunction issued June 16. This trio formerly operated in the field as the Golding - Murchison Oil Company, which was dissolved upon the transfer of the properties on May 26 to the American Liberty Oil Company, a Delaware corporation, with headquarters at Chicago. The affairs of the company in Texas are still under the management of Murchison and associates.

Earlier in the week injunctions were issued against the following operators, who are alleged to have exceeded proration allowances in producing their respective wells in the field: Harry W. Elliott, Fort Worth; Dale Sneed, Tyler; C. C. Malone, A. A. Malone and C. W. Byers.

A number of separate suits are reported to be in process of completion that will be filed shortly by the Attorney General's department against East Texas violators, asking for the collection of penalties amounting to $1,000 per day for each day that a given lease has exceeded proration quotas. It is rumored that one group of violators would be liable to a fine amounting to approximately $1,000,000 should the State win the suit.

J. E. FLANAGAN, superintendent of the land and leasing department, The Texas Company, Tulsa, has departed for California where he will spend a month vacationing.

Pipe Line Bombings "Warn" Objectors to Conservation

Kilgore, Texas.—Explosion of a carefully planted bomb on the eight-inch trunk line of Tyler Pipe Line Company, which transports crude from the East Texas field to a refinery and tank car loading rack at Tyler, temporarily stopped shipments on June 13. This is the second case of property destruction to occur in the field within the past two months, as the loading rack line of the Alfred Macmillan interests was cut on April 11 while making deliveries from the latter's J. R. Fenton lease, Gregg County. In each instance the pipe line companies had previously attacked proration rules with court injunctions, and in turn had been charged by state proration enforcement bodies with handling oil produced from wells in excess of proration allowables.

A charge of dynamite was believed to have been used in blowing up Tyler Pipe Line Company's line at an isolated point near the Rusk-Smith County line, as a piece of fuse and other evidence were found near the scene of the explosion as proof of such a conclusion, according to Clint W. Murchison, Dallas, head of the company. Murchison stated that he had been previously warned that the company's physical properties were to be bombed, and for this reason the company's field staff had been watching for suspicious characters around pump stations and storage tanks. The parting of the trunk line caused a loss of only about 4000 barrels of crude, according to Murchison, as the line had only resumed operation about 9 p.m., the night before, after having been idle since the company obtained a federal court injunction against the Texas Railroad Commission on May 28. It is believed the explosion occurred about 3 a.m., as it was not discovered for several hours afterwards because of absence of pump pressure on the line.

A complete report on the property damage was made by Murchison to military authorities, and the latter offered to provide protection by stationing troops on the company's properties. The military proration enforcement body is enjoined by an old injunction from jurisdiction over the properties of Murchison and associates, but the Texas Railroad Commission still has the power by court ruling, subject to decision now pending, to restrict the output of wells owned by the group. Murchison thanked the military for their willingness to provide future protection in declining the offer, and expressed confidence that no further attempt at violence would be committed by those responsible for the bombing of the line.

Magnolia Petroleum Company's H. B. Ziegler lease, P. McAnelly Survey, Gregg County, sustained the loss of several thousand barrels of oil when unknown parties opened the gate valve on one of the wells on the property, causing the tank battery to overflow last week. Other major companies in the past have had similar experiences, and in many instances have installed locking devices to prevent wells from being opened.

Permit Burning Panhandle Gas for Carbon Black

Austin, Texas, June 17.

In an opinion written by Fred Upchurch, assistant attorney general, the Texas Railroad Commission was today authorized to grant permits for the erection and operation of gasoline extraction plants and carbon black plants in Texas, "when it appears to be in the interest of the public welfare."

Mr. Upchurch explained that this term might apply to only one person or group of persons, and did not mean the "welfare" of every person who was a citizen of the State of Texas.

This opinion was requested by the commission following the hearing on the case of Hagy, Harrington and Marsh, Panhandle gas operators, who requested permission to install such plants for the treatment of dry gas from their 40,000-acre lease in the Panhandle area. They requested the plant "in the interest of the public welfare," declaring that their properties were being drained by offset production and that there was no market outlet for their gas for light fuel, or power. They plan to blow the residue gas into the air.

Both the opinion requested from the attorney general and the decision of the commission were withheld pending the outcome of the suit brought by other Panhandle gas operators in the Federal Court at Houston, charging that the common purchaser gas law, which had been invoked previously, was unconstitutional. The court ruled in their favor last week, which left the Hagy, Harrington and Marsh interests without an outlet for their production, and in a situation confronted by many other operators in Texas who are similarly situated.

East Texas Wells Allowed 51 Barrels, June 16 to 30

Tyler, Texas.—The three barrel cut in the allowable production per well put into effect in the East Texas field 7 a. m. June 16 by State proration enforcement authorities limits the output to 51 barrels per well daily, or nearly 50 per cent under the daily allowable at the start of the present year. This reduced allowable limits all wells to a gross earning power of $49.98 daily, or only $43.73 when the usual royalty interest is deducted. Should it be possible to maintain this rate of earnings the average well would require about one year's production to pay out the cost of drilling and equipping same for flowing into tanks.

The field was credited with having 6230 completed wells at the start of the new proration period, and will be yielding considerably more than the tentative limit of 325,000 barrels daily before the end of the month, as new wells are being added at rate of 20 daily. Indications are that more than 6500 wells will be on the completion list by July 1, and unless crude purchasing companies in the field step up their takings the allowable must then be lowered slightly below 50 barrels daily per well. An allowable of less than 40 barrels daily per well before the end of the year is no longer a remote possibility. Proration authorities have been making deeper cuts in the well allowable for the past six periods in an effort to balance the field's ouptut with the available market outlet, with a view of assisting owners of unconnected wells to line up pipe line connections.

Thirteen reductions have been made in the well allowable during the 291 days that have elapsed since the field went on a flat quota per well beginning September 5, 1931, having started off on the latter date with 225 barrels daily per well. Wells that were on production September 5, and produced their maximum allowance, excepting the 10 days loss through observance of Sunday holidays on production, will have produced a total of 30,316 barrels up to the close of the present period on July 1. When calculated on a basis of the posted price of Magnolia Petroleum Company during this period the gross earning power of a well totals $24,351.38, or $21,307.45 with the usual one-eighth royalty deducted. However, no allowances are made in these figures for fixed deductions made by pipe line companies, ranging from one to three per cent of the gross output, or taxes and operating overhead.

Central East Texas Field Developments

Completions

Company, Well and Location—	Initial Production Bbls.	Depth
JOINER AREA—		
American Liberty Oil Co. (was Golding-Murchison), Strickland (103-ac) 1-B	150	3672
British-American Oil Prod. Co., Murphy (38-ac) 4	9000	3657
Butler & Calhoun, C. C. Lowe 1...	*	3852
C. Cockerham et al, A. J. Deason (5-ac) 2	2500	3709
J. J. Deaner & Reynolds Drl. Co., B. Wilson (20-ac) 2	9000	3761
Duncan & Holt, R. A. Motley (35-ac) 2	7000	3802
Gulf Prod. Co., Mayfield (53-ac) 4-D	8000	3603
J. W. Shaw (89-ac) 3	7500	3766
Humble O&R Co., Walter Shaw (73-ac) 3	11,000	3704
R. E. L. Silvey (115-ac) 8-A	12,000	3734
R. E. L. Silvey (3-ac) 1-D	10,500	3790
Virginia Turner (146-ac) 4-A	9600	3758
M. Wooster 5	9000	3803
H. L. Hunt Prod. Co., W. R. Fair (138½-ac) 4-B	9200	3700
Joe Lee (42-ac) 2-A	10,000	3738
R. J. Vinson (59-ac) 1-A	7000	3722
Smith-Wilson (58½-ac) 4-A	8500	3757
A. B. Wooley (53-ac) 4	5000	3765
Magnolia Pet. Co., W. M. Jernigan (110-ac) 4	12,000	3627
Manahan Oil Co., S. S. Cook (7.3-ac) 1	6500	3722
Joe Marr Drilling Co. Lacy-Pure (50-ac) 1	*	3705
Mid-Kansas O&G Co., M. M. Cross (814-ac) 14	9600	3614
W. T. Grissom (320-ac) 3	6000	3675
J. F. Mason (104-ac) 8	6500	3642
S. H. Moore (200-ac) 6	6000	3713
M. A. Price 2	7200	3618
Petroleum Marketing Corp., J. E. Arnold 2	3000	3750
Sinclair Prairie Oil Co., D. Bradford (35-ac) 3	2500	3636
W. W. Holland (50-ac) 10	250	3695
A. S. Jarvis (266-ac) 15-A	7500	3729
A. S. Jarvis (256-ac) 13-C	9600	3694
Allen Kersh (241-ac) 2	4500	3656
W. D. Kinney (579-ac) 25	7000	3668
W. D. Kinney (579-ac) 28	6500	3647
W. D. Kinney (579-ac) 29	6500	3712
D. Ledbetter (191-ac) 6	7000	3662
D. Ledbetter (191-ac) 8	7200	3627
W. H. McCord (50-ac) 3	8500	3662
G. Patterson (153-ac) 5	1200	3722
Amanda Wiley (312-ac) 7	12,000	3828
Smith Co. O&G Co. (M. B. Rudman), S. S. Cook (50-ac) 1	7800	3716
Standard Oil Co. (Kansas) was Tulsa Oil Co., Thompson (59-ac) 2	8400	3626
Stanolind O&G Co.-Pure Oil Co., R. J. Burton (145-ac) 4	9000	3660
R. A. Moores (251-ac) 9	13,000	3613
W. H. Siler (949.6-ac) 7	10,000	3620
Summitt Drl. Co., Mayfield-Shell (200-ac) 6	8500	3851
Sun Oil Co., Schuyler (72-ac) 4-B	1000	3680
The Texas Co., 1st. State Bank (160-ac) 6	5000	3716
L. J. Pinkston (80-ac) 6	6000	3671
Tidal Oil Co., O. Whittington (39-ac) 2	1500	3644
KILGORE AREA—		
Adams & Lyles, L. Howard (49-ac) 2	9000	3630
Allender & Rasmussen, J. M. Dickson (106-ac) 1	15,000	3709
Atlantic Oil Prod. Co.-Byrd & Frost, Inc., Hughey 8	9500	3596
R. Whaley (71-ac) 5	10,000	3617
Atlantic (was Mills Bennett) Brightwell (88-ac) 11	7000	3634
Burnham & Johnston, A. Jackson-Sample (55-ac) 1	3000	3765
Cal-Tex Corp. L. D. Crim (50-ac) 2	8000	3588
Canadian Oil Prod. Co., S. Hilburn-Jenkins 3	7200	3653
Continental Oil Co., C. C. Crews, (160-ac) 6	8200	3585
Empire Gas & Fuel Co., V. L. Taylor (40-ac) 3	12,000	3717
Galvez Oil Corp., M. T. Cole, (40-ac) 3	12,000	3558
Lonnie Glasscock et al, H. Goforth, (10-ac) 2	9000	3739
Gulf Prod. Co., C. Brown (60-ac) 7	8500	3589
C. Brown (60-ac) 9	10,000	3612
C. E. Christian (100-ac) 6-A	7000	3624
S. E. Christian (100-ac) 8-A	9000	3627
M. T. Cole (160-ac) 7	7200	3532
G. W. Culver (244-ac) 10	5000	3559
S. Hilburn 25	10,500	3558
S. Hilburn 26	12,000	3587
J. T. Sexton (165-ac) 3	6500	3716
Houston Oil Co., M. T. Cole (40-ac) 2	8500	3568
Houston-Heep Oil Corp., S. B. Hall (50-ac) 4	5000	3694
Humble O&R Co., L. D. Crim (628-ac) 57	8000	3625
Jones-O'Brien, Inc., John Lloyd (25-ac) 4	12,000	3595
M. B. Hughey-Ross (127-ac) 6	7500	3552
Frank King et al, J. H. Scoggins-Republic (50-ac) 1	6000	3648
Kniveton Oil Co., W. P. Crews, (48-ac) 2	9600	3731
Magnolia Pet. Co., Alonzo Hicks (99-ac) 8	10,500	3727
C. C. Still (100-ac) 6	15,000	3695
Naomi Towels (8½-ac) 1	12,000	3665
C. L. McMahon et al, S. S. Laird (45-ac) 5	8200	3660
Mullendore & Berry, W. W. Elder (20.45-ac) 4	8000	3580
Patterson Drl. Co., W. M. Brightwell (3.4-ac) 1	5500	3661
Ruston Drl. Co., R. Lacy (26-ac) 3	7000	3559
Selby Oil & Gas Co., M. T. Cole (80-ac) 2	8600	3562
Shell Pet. Corp., J. B. Watson (285-ac) 16	10,000	3640
J. B. Watson (285-ac) 17	6500	3593
Sinclair Prairie Oil Co., A. A. King (290-ac) 21-A	13,000	3468
A. A. King (290-ac) 26-A	14,000	3514
Stanolind O&G Co., C. O. Christian 6	10,000	3651
Wm. Clayton (50-ac) 4	7500	3622
Sun Oil Co., M. T. Cole (264-ac) 5	12,000	3548
Tidal Oil Co., M. G. Barton (193-ac) 9	11,000	3600
Jack Bean (85-ac) 5	6000	3650
J. S. King (80-ac) 9	3000	3591
M. K. Towns et al, Grif Davis (10-ac) 2	8500	3630
T. J. Tucker et al, Mary Rufus (½-ac) 1	150	3630
W. B. Tucker et al, D. Wills (42-ac) 3	7000	3684
Wells & Gann Drl. Co., M. Charles 4	8800	3656
LONGVIEW AREA—		
Amerada Pet. Corp., E. Burnside (100-ac) 5	13,000	3560
Atlantic Oil Prod. Co., W. P. Duncan (154.7-ac) 10	9000	3637
T. B. Harris (91-ac) 2	11,000	3567
J. C. Judge (520-ac) 21	12,000	3523
H. Pritchard (100-ac) 3	15,000	3522

Company, Well and Location—	Initial Production Bbls.	Depth
Atlantic-Sun Oil Co., R. C. Barnwell (100-ac) 2	8500	3500
Atlantic-J. K. Wadley, Mose Turner (161-ac) 9	9500	3630
Byrd & Frost, Inc., J. J. Reppond (49-ac) 3	8500	3680
California Pet. Corp., Mrs. I. Walker (120-ac) 7	7000	3671
Central Drl. Co. et al, Castleberry (4-ac) 1	11,000	3692
Clark-Cowden & Sikes, J. W. Free (37-ac) 2	7000	3659
Cranfill-Reynolds Co., Fee (7-ac) 1	11,000	3511
Cranfill-Reynolds & Leon Russ, J. Williams (101-ac) 1	10,500	3662
Dyke Oil Co., J. M. Christian (37-ac) 3	9000	3590
East Texas Ref. Co., Doby-Rodden (40-ac) 4	8500	3760
F. White (96-ac) 4	11,000	3565
Empire Gas & Fuel Co., Joe Bander (93-ac) 7	9200	3635
J. T. Jeter 3	9600	3602
Fain-McGaha Oil Corp., W. A. Bauknight (53-ac) 5	12,000	3615
Faith Oil Corp., E. H. Brawley (180-ac) 1	4500	3651
J. C. Falvey et al, Betty Doby (20-ac) 2	9000	3770
F-H-E Oil Co., J. E. Christian (33-ac) 4	12,000	3639
E. L. Foshee et al, Stancil 1	15,000	3609
Gulf Prod. Co., J. C. Judge (518-ac) 6	9800	3523
J. C. Judge (518-ac) 7	9500	3523
H. B. Herring et al, Hestland 1	8000	3629
Humble O&R Co., H. Castleberry (172-ac) 1	8000	3533
J. T. Miller (57-ac) 3-B	9000	3714
J. T. Miller (57-ac) 4-B	4000	3693
J. Phillips (75-ac) 4	8800	3690
I. D. Smith (72-ac) 8	6000	3643
J. M. Smith (86-ac) 3	7200	3654
G. W. Willingham (40-ac) 4	3000	3663
Magnolia Pet. Co., J. W. Free 10	9000	3686
A. J. Green (41.1-ac) 3	6000	3629
Midas Oil Co., A. V. Bacle 5	9000	3638
Geo. Miller et al, Floyd Jones (23-ac) 2	8200	3564
Mudge Oil Co., A. L. Shelton (8.8-ac) 1	3500	3755
Pilot Oil Co., P. McGeorge (12-ac) 1	8000	3523
Rancho Oil Co., J. K. Edwards (106-ac) 8	7200	3647
J. D. Reynolds et al, Nicholson 1	6500	3658
Rhodes Drl. Co., Christian 1	9500	3622
Shell Pet. Corp., W. L. Brawley (33-ac) 3	10,000	3751
Jas. Moore (369.9-ac) 8	9000	3558
Jas. Moore (369.9-ac) 10	9500	3549
Silver Star Oil Co.'s Geo. Anderson (8-ac) 3	7000	3533
Simms Oil Co.-Frank Buttram, W. R. Nicholson (800-ac) 5	7500	3661
Sinclair Prairie Oil Co., M. Lawson (46-¾ac) 6	12,000	3535
W. H. York (86-ac) 4	9000	3587
Stanolind O&G Co-Simms, Flewellen (374-ac) 13-B	7000	3673
Percy McGeorge (100-ac) 5	12,000	3527
Stanolind-Simms-Continental Oil Co., Flewellen (200-ac) 4-C	9400	3709
Stanolind-Simmn-Peachblossom Oil Co., Akin (80-ac) 3	13,500	3619
Sun Oil Co., J. C. McKinley (80-ac) 7	9000	3671
T. C. Ramey (90-ac) 4	3500	3756
Allen Tooke (80-ac) 4-B	10,000	3635
Superior Oil Co., L. C. Ingram (160-ac) 10	9000	3614
Tidal Oil Co., J. J. Castleberry (202-ac) 12	2000	3610
Lake Devernia (270-ac) 12	15,000	3549
Boston Moore 4	13,000	3536
Boston Moore 6	10,000	3568
Yount-Lee Oil Co., J. D. Davis (80-ac) 5-A	9600	3617
Maude Smith 3-B	11,000	3515
VAN FIELD—		
Pure Oil Co., N. R. Blake (78.3-ac) 2	1200	2990
V. T. Davis (139.8-ac) 2	*	3001

CENTRAL EAST TEXAS
Completions

Company, Well and Location—	Initial Production Bbls.	Depth
CHEROKEE COUNTY—		
Mustang Oil Co. et al, Decker 1	*	5232

Permits for Texas Wells

ARCHER COUNTY—Luke Hodges, Wichita Falls, Farmer, 80, 1, Blk. 55, BCSL sur, 105 ft from s and 150 ft from e line. J. M. Seaberry, Holliday, W. L. Andrews, 160, 1, Whitaker sur, 150 ft from s and w lines. Texas Co., Wichita Falls, Abercrombie-Taylor, 200, 1, B 38, Club Ranch sur, 700 ft from w and 1250 ft from n line. Fain-McGaha Oil Corp., Wichita Falls, Fee, B, 60, 2, B 2, DCSL Sur. No. 3, 150 ft from n and e lines. W. B. Hamilton, Wichita Falls, J. L. Young, 235, J. J. Young sur, 1463 ft from n and 330 ft from e line. Moran Co., Wichita Falls, W. R. Dupriest, 93, 1, 2489 TE&L sur, 150 ft from s and e lines.

BROWN COUNTY — Charter Oil Co., Brownwood, L. L. Childress, 33, 1, J. Armendaris sur, east central part of lease; 4, ne corner; 6, west central part of lease; 9, se corner; 10, center. Winters & Johnson, Brownwood, F. Turner, Jr., 40, 1, S 46, HT&B sur, 150 ft from n and 1200 ft from e li of sec.

BREWSTER COUNTY—C. M. Joiner, Dallas, W. McIntyre, 1280, 1, W. J. Mitchell sur, 2391 ft from e and 853 ft from s line.

CHAMBERS COUNTY—Texas Gulf Prod. Co., Houston, Kirby Pet. 22, H-10, H. Griffith sur, 1544 ft from e and 41 ft from n line; C. M. Barber 5, 2, H. Griffith sur, 514 ft from e and 41 ft from s line.

COOKE COUNTY—E. J. Ruwaldt, Gainesville, H. Sarls, 30, 1, M. Elliott sur, 250 ft from e and 220 ft from s line.

COTTLE COUNTY — Darby Pet. Corp., Tulsa, Okla., C. Pursel, 632, 1, S 40, B B, J. H. Stephens sur, 330 ft from n and 1320 ft from e line.

CROCKETT COUNTY — Stanolind Oil & Gas Co., Fort Worth, J. S. Todd, 3040, 1, S 67, B UV, GC&SF sur, 1331 ft from n and e lines of sec.

DUVAL COUNTY—Duval Oil Corp., San Antonio, Bishop, 320, 11, Sec. 135 sur, 330 ft from n and 1006 ft from w line.

FALLS COUNTY — Hartman, Zander & Hodde, Perryton, H. T. Barton, 22, 1, Vasquez & Morgan sur, 225 ft from w and 65 ft from n line.

GREGG COUNTY — Columbia Oil & Gas Co., Dallas, A. Christian, 17, 4, Hooper sur, 539 ft from n and 167 ft from w line. A. F. McGehee, Jr., Dallas, W. P. Crews, 9, 1, J. W. Bradshaw sur, 150 ft w of center of e line. W. T. Mack, Tyler, R. S. McKinley, 43, 1, Wm. Robinson sur, 230 ft from w and 345 ft from n line. V. P. Lary, Longview, Bramlette, 8, 1, D. Sanchez sur, 330 ft from w and 145 ft from n line. Acme Oil Co., Tyler, J. S. Elder, 3, 1, M. Van Winkle sur, center. Abernathy & Kirkpatrick, Gladewater, J. H. Victory, 1½, 1, Gladewater sur, center of blk 33. J. C. Little, Longview, Elmira Ch., 15, 3, D. Sanchez sur, 155 ft from w and 330 ft from n line. Leonard Pet. Co., Tyler, E. Register, 100, 4, G. F. Penn sur, 660 ft s of No. 1; 3, 340 ft from e and 791 ft from s line. B. K. Isaacs, Fort Worth, T. B. Harris, A, 21, 2, W. H. Castleberry sur, 246 ft from e and 330 ft from s line. L. A. Sharp, Denton, A. Bacle, 3½, 1, D. Sanchez sur, center. Robt. Jordan, Tyler, W. P. Crews, 13, 1, J. W. Bradshaw sur, 275 ft from n and 330 ft from e line. H. R. Smith, Inc., Luling, R. Gray, 31, 1, D. Dainwood sur, 181 ft from e and 285 ft from s line. Welch & Sandler, Kilgore, R. W. Barnett, 107, 3, J. Taylor sur, 990 ft from e and 330 ft from s line; 4, 350 ft from n li and 660 ft n of No. 2; 5, 1300 ft from n and 740 ft from w line; 6, 640 ft from n and 800 ft from w line. Arctic Oil Co., Fort Worth, J. S. King, 1, 1, M. Van Winkle sur, 105 ft from n and 125 ft from e line. Red Star Oil Co., Longview, F. Christian, 23, 2, G. W. Hooper sur, 330 ft from s and w lines. Clark, Cowden & Delaney, Duncan, Okla., Clemmons 22, 2, D. Sanchez sur, 330 ft from n and e lines. Byrd-Frost, Inc., Longview, G. E. Adams, 11, 2, H. Hathaway sur, 188 ft from e and 200 ft from s line. Arthur Baughman, Longview, Fee, 2, 1, D. Moore sur, center. Alex Goldsmith, Tyler, Wm. Cobb, 7, 1, C. Rhodes sur, center. Standard Oil Co. of Kansas, Wichita, Kansas, J. W. Fuller, 22, 1, D. Sanchez sur, 200 ft from w and 330 ft from s line. Selby Oil & Gas, Tulsa, Okla., Snavely, B, 361, 8, F. W. Johnson sur, 3700 ft from n and 330 ft from e line; 11, 2380 ft from n and 330 ft from e line; 12, 3040 ft from n and 330 ft from e line. Gulf Prod. Co., Houston, M. O. Shepperd, 335, 12, G. R. Rains sur, 370 ft from e line and 660 ft n of No. 11; 11, 367 ft from e and 330 ft from s line; C. Brown, 255, 11, L. B. Outlaw sur, 330 ft from n and w lines; C. L. Still, 20, 1, J. Wilkinson sur, 330 ft from n and w lines; J. C. Judge, 518, 10, F. W. Johnson sur, 365 ft e of center of w line; S. C. Hillburn, 200, 11, F. W. Johnson sur, 660 ft e of No. 3; F. M. Fonville, 100, 5, Wm. Tyndale sur, 766 ft from s and 1145 ft from e line; H. C. Alexander, 209, 11, M. Van Winkle sur, 330 ft from n and e lines; 12, 950 ft from s and 1890 ft from e line; S. Hilburn, C, 89, 21, J. Hay sur, 330 ft from s and w lines; J. H. Bozman, 111, 7, H. Edwards sur, 330 ft from s and w lines; G. Davis, 50, 3, W. P. Chisum sur, 330 ft from s and w lines. Magnolia Pet. Co., Dallas, N. Radford, 100, 3, Jno. Blair sur, 330 ft from w and 1035 ft from s line; Stone, 66, 2, D. Sanchez sur, 994 ft from n and 275 ft from w line; Laird-Crim, 71, 3, L. B. Outlaw sur, 330 ft from n and 213 ft from w line; H. Key, 60, 5, J. D. Moore sur, 204 ft from n and 94 ft from w line; T. Stinchcomb, 111, 4, Wm. Hart sur, 330 ft from s li and 660 ft w of No. 1. Gulf Prod. Co., Houston, S. Hilburn, B, 187, 27, L. B. Outlaw sur, 660 ft e of No. 22. Sinclair Prairie Oil Co., Fort Worth, A. A. King, B, 111, 7, J. G. Walker sur, 330 ft from n and e lines; S. G. Andrews, 200, 10, J. G. Walker sur, 1690 ft from n and 1890 ft from w line; 9, 990 ft from s and 1450 ft from w line; A. A. King, B, 147, 6, Jno. Keiser sur, 1345 ft from w and 2485 ft from s line; A. A. King, 91, 3, Jno. Keiser sur, 2074 ft from s and 368 ft from w line; 2, 2874 ft from s and 368 ft from w line; M. T. Cole, 666, 28, S. Brooks sur, 2035 ft from e and 3720 ft from n line; 29, 3660 ft from n and 2205 ft from w line; J. E. Lawther, 320, 10, M. Garrett sur, 330 ft from s and w lines; 9, 2552 ft from n and 330 ft from w line; 11, 2107 ft from n and 1275 ft from w line; Atlantic Oil Prod. Co., Dallas, S. S. Barton, 47, 4, D. Sanchez sur, 535 ft e of No. 1; M. Hays, B, 404, 21, Alvice sur, 350 ft ne of No. 2. Magnolia Pet. Co., Dallas, E. H. Brawley, 80, 5, C. H. Alexander sur, 87 ft from n li and 518 ft e of No. 4. Simms Oil Co., Dallas, J. J. Flewellen, B, 374, 14, M. Mann sur, 3990 ft from e and 425 ft from n line. Stanolind Oil & Gas Co., Fort Worth, G. F. Meadows, 50, 4, D. Sanchez sur, 330 ft from e and 243 ft from s line. East Texas Oil & Ref. Co., Dallas, J. W. Fuller, 22, 2, D. Sanchez sur, 200 ft from e and 350 ft from s line. Yount-Lee Oil Co., Beaumont, F. Smith, 70, 4, Wm. Robinson sur, 330 ft from s and e lines; F. Jones, 51, 6, W. H. Castleberry sur, 218 ft from n li and 555 ft ne of No. 4. Texas Co., Shreveport, La., J. W. Radford, 50, 1, G. F. Penn sur, 225 ft from e and 330 ft from s line. Empire Gas & Fuel Co., Gladewater, J. Bander, 93, 8, W. H. Castleberry sur, 330 ft from s and 917 ft from e line. Sun Oil Co., Dallas, M. Thomas, 79, 3, P. McAneliy sur, 450 ft n of No. 1; J. M. Haynes, 203, 7, G. A. Thomason sur, 450 ft from w and 655 ft from s line; M. T. Cole, 264, 10, A. Park sur, 330 ft from w li

and 660 ft n of No. 6. Tidal Oil Co., Kilgore, Lake Devernia, 271, 14, W. H. Hart sur, 1120 ft from n and 430 ft from w line; 13, 520 ft from e and 885 ft from n line. Amerada Pet. Corp., Fort Worth, L. R. Hearne, 108, 8, W. H. Castleberry sur, 330 ft from n and e lines. Shell Pet. Corp., Dallas, J. Douglas, B, 76, 4, W. P. Chisum sur, 660 ft n of No. 3.

GONZALES COUNTY — A. J. Nassamer, San Antonio, F. Ramzinsky, 230, 1, Gonzales Rge. 5, B 12, 310 ft from e and 900 ft from s line.

GLASSCOCK COUNTY — Amerada Pet. Corp., Fort Worth, R. C. Coffee, 80, 4, S 22, B 33, T&P sur, 330 ft from w and 1300 ft from n line.

HARDIN COUNTY — Paraffine Oil Co., Houston, Fee, 12, 92, F. H. Green sur, 316 ft from w and 111 ft from n line. Rio Bravo Oil Co., Houston, Fee, 320, B 139A, BBB&C sur, 200 ft w and 28 ft n of No. 136A.

JACK COUNTY—A. H. & S. P. Schmidt, Fort Worth, H. Lewis, 1, E. Ray sur, 1400 ft from w and 1300 ft from n line.

JASPER COUNTY—Rio Neches Oil Co., Oklahoma City, Okla., Boykin, 160, 3A, M. Rackie sur, North of No. 2B; 1, se corner.

JEFFERSON COUNTY—Elane & Denney, Port Arthur, M. Broussard, 206, 1, McGaffy sur, 500 ft from s and 1300 ft from e line.

JIM HOGG COUNTY — Clark & Cowden, Duncan, Okla., E. Vela, 40, 1, S 573, Sh. No. 1, 3590 ft from w and 2500 ft from s line.

LIMESTONE COUNTY—Joiner Pet. Corp., Dallas, W. Stephenson, 54, 1, G. Gentry sur, south corner.

MONTGOMERY COUNTY—Geo. L. Pace, Dallas, Hogg, 1398, 1, Ranssom House sur, 200 ft from n and e lines.

NAVARRO COUNTY — Wm. Clarkson, Houston, Bradley, 200, 3, 3, Robertson CSL sur, 455 ft s of No. 29.

PALO PINTO COUNTY—C. F. Gibson et al, Albany, G. W. Watson, 1, Strawn Twste. sur, 150 ft from e and 200 ft from n line block.

PECOS COUNTY—Culbertson Bros., Fort Worth, H. Monroe, 520, 9B, S 39, B 194, GC &SF sur, 1566 ft from e and 150 ft from n line; 10B, 1910 ft from n and 606 ft from e line. New State Oil Corp., Fort Worth, J. H. Tippett, 21, 1, S 40, B 194, GC&SF sur, 300 ft w of center of e line. Aero-Gas Refg. Co., Fort Stockton, L. L. Byrne, 13, 2, S 54, B 10, H&GN sur, ne corner.

RUSK COUNTY—W. H. Whisenant, Dallas, Eaton, B, 21½, 4, F. Cordova sur, 190 ft from n and 150 ft from w line. Clint Wood Drilling Co., Tyler, J. B. Irwin, 35, 4, J. Lindley sur, 100 ft from s and 400 ft from e line. J. G. Phillips, Mexia, E. B. Alford, 2½, 1, I. G. Parker sur, center. De Arman Prod. Co., Tyler, J. Bell, 5, 1, S. P. Hollingsworth sur, center. Navarro Oil Co., Houston, J. Bell, 5, 1, S. P. Hollingsworth sur, center. J. A. McIntyre, Tyler, C. N. Dickerson, 57, 2, T. J. Martin sur, 330 ft from s and w lines. Tom J. Spikes, Overton, J. W. Kee, 10, 1, J. W. Lindley sur, 330 ft from e and 100 ft from s line. Malernee & Bullock Oil Co., Oklahoma City, E. B. Alford, 24, 4, T. J. Moor sur, 143 ft from w and 86 ft from n line. Ward Oil Corp., Ardmore, Okla., Finney, 24, 7, M. J. Pru sur, 185 ft from e and 192 ft from s line. G. P. Birdwell, Overton, T. H. Gill, 5, 1, R. W. Smith sur, 420 ft n of center of s line. Heep Oil Corp., Houston, A. Givens, 12, 2, R. W. Smith sur, 175 ft from n and 155 ft from w line. Willard Oil Co., Henderson, J. Alford, 21, 2, T. J. Moore sur, 167 ft from e and 150 ft from s line. Falcon Co., Fort Worth, W. H. McCord, 10, 1, J. B. Cadena sur, 326 ft from s and 183 ft from e line. Mills Bennett Prod. Co., Houston, W. J. Brightwell, 88, 11, R. E. Winn sur, sw corner. Fair & Thompson, Tyler, W. E. Wylie, 29, 2, J. Ximinez sur, 200 ft e of center of w line. E. H. Moore, Tyler, W. P. Moore, 23, 2, H. Wiggins sur, 330 ft from w and in center of line. R. W. Fair Oil Co., Tyler, Fee, 28, 3, M. J. Pru sur, 480 ft from w li and 460 ft se of No. 1. C. L. McMahon, Tulsa, Okla., S. S. Laird, 45, 5, R. W. Smith sur, 250 ft w of center of e line. E. A. Leavenworth, Tyler, W. W. Hall, 3, 1, W. G. Tutt sur, 127 ft from s and 248 ft from e line. Lafayette Oil Corp.,, Fort Worth, O. Roberson, 2½, 1, T. Grace sur, center. W. S. York, Henderson, W. H. Warrell, ½, 1, Cadena sur, center. F. W. Roe, % Lucey Pet. Co., Longview, B. F. Maxwell, 22, 2, R. H. Penney sur, 285 ft from n and 161 ft from e line. Conservative Oil Co., Dallas, L. Harmon, 6, F. Cordova sur, 160 ft from n and 472 ft from e line; 7, 137 ft from n and 150 ft from w line. East Shore Oil Co., Henderson, T. Fox, 40, 4, A. Cormack sur, 540 ft n of No. 2. Lucey Pet. Co., Longview, B. F. Maxwell, 94, 5, E. Collard sur, 330 ft from n and e lines. Mid-Kansas Oil & Gas Co., Shreveport, La., H. C. Burton, 254, 8, W. D. Porter sur, 330 ft from n and 442 ft from w line; 7, J. B. Cadena sur, 330 ft from s and 1325 ft from w line; M. A. Price, 201, 6, T. M. White sur, 760 ft from n and 88 ft from w line; M. M. Cross, 814, 28, J. B. Cadena sur, 350 ft s of No. 17. M. A. Price, 202, 7, J. B. Cadena sur, 330 ft from n and 183 ft from e line; R. G. Mason, 104, 5, J. B. Cadena sur, 330 ft from e and 825 ft from s line; D. Ledbetter, 212, 4, W. J. Roan sur, 520 ft from n and 330 ft from e line. Gulf Prod. Co., Houston, H. Sexton, 54, 3, T. Grace sur, 330 ft from n and e lines; G. G. Turner, 312, 11, F. Cordova sur, 330 ft from w li and 660 ft s of No. 4; 12, 990 ft from e and 1945 ft from s line; W. Shaw, A, 53, 3, F. Cordova sur, 892 ft from n and 330 ft from e line; M. E. Peterson, 93, 7, I. Ruddle sur, 660 ft ne of No. 3; C. E. Christian, 164, 9, J. C. Snow sur, 330 ft from w and 316 ft from n line. Woodley Pet. Co., Shreveport, La., J. Ladd, A, 50, 4, Chisum & Ruddle sur, 500 ft from w and 330 ft from n line. Humble Oil & Ref. Co., Houston, S. A. Plowman, A, 229, 13, F. Cordova sur, 228 ft from s and 1423 ft from w line; L. D. Crim, 564, No. 58, E. G. Sevier sur, 200 ft from s and w lines; I. Holt, B, 91, 4, J. M. Barton sur, 982 ft from w and 430 ft from s line; J. R. Box, 125, 7, T. J. Martin sur, 330 ft from w and 1102 ft from n line; J. E. B. Snead, 104, 5, A. Melton sur, 500 ft from w and 330 ft from n line; J. Turner, A, 123, 5, T. J. Martin sur, 500 ft from w and 330 ft from s line; R. E. L. Silvey, C, 61, 3, Geo. Berry sur, 330 ft from n and w lines; J. R. Box, 57, 6, T. J. Martin sur, 330 ft from s and w lines; J. H. Silvey, B, 57, 4, Geo. Berry sur, 330 ft from e and 797 ft from s line; A. D. Blackwell, 80, 5, M. J. Pru sur, 210 ft from s and 2645 ft from w line; 6, 2913 ft from e and 311 ft from s line. Pansy Oil Co., Tyler, F. J. Cox, 10, 2, R. H. Penney sur, 330 ft from e and 150 ft from n line; J. Minchew, 14, 2, H. B. Dance sur, 330 ft from w and 249 ft from s line. Sinclair Prairie Oil Co., Fort Worth, D. Ledbetter, 202, 11, T. M. White sur, 520 ft from s and 330 ft from w line; A. Kersh, 150, 3, E. B. Foulks sur, 845 ft from w and 1584 ft from s line; 4, 845 ft from w and 900 ft from s line. P. S. Tipps, 230, 3, Poindexter sur, 969 ft from n and 790 ft from e line; 4, 330 ft from n and 1650 ft from e line; 5, 972 ft from e and 330 ft from s line; 6, 330 ft from n and 2310 ft from e line. W. H. McCord, 50, 4, J. B. Cadena sur, 183 ft from e and 350 ft from s line. Empire Gas & Fuel Co., Gladewater, C. O. Christian, 103, 8, W. A. Elliott sur, 330 ft from n line and 405 ft w of No. 3. H. L. Hunt, Tyler, R. F. Russell, 35, 3, T. J. Hartin sur, 690 ft from n and 171 ft from e line. R. W. Fair, A, 137, 8, McAnulty & Vargas sur, 330 ft from s and e lines. Bradford, B, 326, 7, J. Ximinez sur, 1450 ft from w and 660 ft s of No. 6. Golding-Murchison Oil Co., Dallas, I. L. Kinney, 336, 9, M. V. Pena sur, 330 ft from n line and 660 ft e of No. 6; 10, 990 ft from n line and 686 ft e of No. 5; 11, 330 ft from n line and 660 ft e of No. 9. W. P. Keeling, 11, 2, F. Cordova sur, 183 ft from n and 330 ft from e line. Sun Oil Co., Dallas, L. Cooper, 28, 2, J. B. Cadena sur, 400 ft from w and 195 ft from n line. Stanolind Oil & Gas Co., Longview, W. H. McCord, 32, 1, M. V. Pena sur, 330 ft from n and 183 ft from w line. Shell Pet. Corp., Dallas, T. Wells, A, 23, 2, H. Hobson sur, 320 ft from n and 300 ft from e line. J. H. Spivey, 88, 6, M. McCabe sur, 330 ft from n and e lines.

SMITH COUNTY—A. U. McCutcheon, Arp, J. Cole, 2, 1, Jas. Jordan sur, center. British American Oil Prod. Co., Tulsa, Okla., M. L. Thompson, 64, 3, I. Moore sur, 300 ft from e and 330 ft from s line. I. P. O'Neil, Tyler, Mayfield, 200, 2, Jas. Jordan sur, 2830 ft from w of center of e line. H. L. Hunt, Tyler, R. W. Fair, B, 139, 5, J. Vargas sur, 330 ft from w and 1449 ft from s line. Sinclair-Prairie Oil Co., Fort Worth, A. Wiley, 312, 3, Jas. Jordan sur, 200 ft n of center of s line.

SHACKLEFORD COUNTY — E. J. White et al, Eastland, L. L. Smith, 67, 2, S 18, B 11, T&P sur, 636 ft from e and 810 ft from n line. Dickey Bros., Albany, E. Webb, 320, 10, 576, TE&L sur, 300 ft se of No. 7.

STARR COUNTY—J. A. Tarver, San Antonio, Seaberry-Taylor, 11, 1, B 21, S 79, 500 ft from w and 160 ft from n line. F. Dawson, Mercedes, G. Madrigal, 897, 1, Por. 72, Sh. 15, J. Mier sur, 4550 ft from n and 2000 ft from w line.

TAYLOR COUNTY—Eastland Oil Co., Ft. Worth, A. W. Hunter, 80, 3, W. R. Willis sur, 250 ft w of center of e line.

UPSHUR COUNTY—Fidelity Oil & Royalty Corp., Houston, M. Bonner, 148, 1, J. McRae sur, 245 ft from n and 1765 ft from w line; 2, 245 ft from n and 330 ft from w line. Decker & Neilon, Marshall, J. P. Lynch, 1, 1, Pineda sur, 106 ft from w cor and 75 ft from sw line. Cranfill & Reynolds, Houston, J. Williams, 101, 2, McKinney & Williams sur, 245 ft n of center of s line. Maddox Dev. Co., W. Starr, 20, 1, C. H. Cooper sur, 330 ft from e and 150 ft from s line. Humble Oil & Refg. Co., Houston, J. T. Miller, A, 58, 2, D. Ferguson sur, 330 ft from s and 1271 ft from e line. Simms Oil Co., Dallas, W. R. Nicholson, 800, 9, M. Mann sur, 1180 ft from s and 2974 ft from e line.

VAN ZANDT COUNTY — C. M. Powell, Dallas, W. E. Price, 4, 1, J. Walling sur, 330 ft from w and 108 ft from n line.

WASHINGTON COUNTY—Clay Creek Oil Corp., Brenham, A. Binnage, 47, 1, J. F. Perry sur, 200 ft from sw and 1300 ft from se line.

WEBB COUNTY — Frank Clark, Laredo, Puig, 160, 1, Las Albercas sur, 750 ft from e and 150 ft from s line.

WICHITA COUNTY — McCarty Oil Co., Wichita Falls, Hardin, 32, O. Farrish sur, 164 ft ne of No. 28.

YOUNG COUNTY—Kleiner & Riggs, Cisco, J. F. Larimore, A, 80, 13, 2246, TE&L sur, ne of No. 6. R. J. Watson, Newcastle, A. C. Watson, 101, 11, 249, TE&L sur, 750 ft from e and 1160 ft from n line. Wooten & Reed, Graham, F. V. Hinson, 200, 2, 1448, TE&L sur, 150 ft from s and w lines. Colbe Oil Co., Wichita Falls, S. E. Snider, 400, 24, R. Wilson sur, 1240 ft from s and 150 ft from w line; 25, 1540 ft from s and 150 ft from w line. C. C. Williams, Jean, J. F. Shatto, 40, 1, 1916, TE&L sur, 150 ft from s and w lines. Iron Mountain Oil Co., Tulsa, Okla., E. P. Tatum, 105, 9, 1908, TE&L sur, 1029 ft from n and 748 ft from w line. W. R. Stewart, Fort Worth, Carpenter, 40, 2, 164, TE&L sur, 300 ft from w and 150 ft from s line. Hubbard Drilling Co., Graham, Greathouse, 120, 1, R. Barr sur, 200 ft from w and s lines. Floyd Ard., Jr., Wichita Falls, T. J. Routon, 80, 1, 24, TE&L sur, 1083 ft from w and 472 ft from n line. A. Pepper, Abernathy, W. T. Finch, 10, 1, 40, TE&L sur, 150 ft from s and e lines.

ZAPATA COUNTY—L. G. Smith, Hebbronville, J. M. G. Martinez, 80, 5, B 18, Sh. B, 350 ft from ne and se lines; 776, 1, C. Redondo sur, 150 ft from s and w lines; 2, 150 ft from w and 450 ft from s line; 3, 450 ft from s and w lines; 4, 450 ft from w and 150 ft from s line; 5, 750 ft from w and 150 ft from s line; 6, 750 ft from w and 450 ft from s line; 7, 150 ft from s line and 300 ft se of No. 13; 8, 150 ft from w and 750 ft from s line; 9, 450 ft from w and 750 ft from s line; 10, 750 ft from s and w lines; 11, 1050 ft from w and 450 ft from s line; 12, 1050 ft from w and 150 ft from s line; 13, 300 ft se of No. 11; 14, 300 ft from w line and 300 ft ne of No. 8; 15, 600 ft from w line and 300 ft ne of No. 9; 16, 900 ft from w line and 300 ft ne of No. 10; 17, 1350 ft from w line and 300 ft s of No. 18; 18, 300 ft n of No. 17; 19, 300 ft ne of No. 15. J. M. G. Martinez, 88, 2, 150 ft from e and 450 ft from s line. F. J. Searight, Laredo, F. Munoz, 1700, 1, Por. 18, B 81 and 82, 660 ft n of center of s line. Allied Oil & Gas Co., Laredo, E. Gutierrez, 532, 27, Sh. 4, Las Comitas sur, 463 ft from e and 1375 ft from s line; 26, 150 ft from e and 1525 ft from s line. S. A. Thompson, Fort Worth, M. Garza, 40, 1, B 20, Comitas sur, 150 ft from ne and 450 ft from se line.

NORTH and WEST TEXAS

Two Points in Archer County to Be Given Tests. Chalk Hill Extension Well Not Good as Expected.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Move to Bring North Texas In Line With Demand

Wichita Falls, Texas.—More equitable distribution of the available crude market outlet in North Texas is sought in steps taken effective June 15 by the proration forces of the Texas Railroad Commission in limiting the output of wells capable of yielding more than the marginal allowance to only seven per cent of the potential. Heretofore, all wells exceeding the marginal quota have been allowed to produce 20 per cent of their potential, but in doing so a surplus production has appeared, with a number of instances of no market being available for properties, and a few cases of independent refiners filling their requirements at distress prices. The revised plan will limit production to about 56,000 barrels daily, or about equal to the nominated demand of all purchasers, and it is possible that the growing practice of selling crude at less than posted will be eliminated.

Falls Refining Company et al's south extension producer to the 2200-foot pay in the Chalk Hill field failed to fulfill expectations after swabbing test was given L. F. Wilson 1, SW Section 119, A. T. N. C. L. Survey, from broken sand and sandy-lime at 2187-2215 feet. It yielded from 50 to 100 barrels daily, and is to be deepened.

Another Strawn sand test is to be drilled in Central Archer County as result of this horizon having yielded a small producer after a shot at 3614-40 feet, with a total depth of 5750 feet, from a well in Chalk Hill field proper. Bridwell Oil Company's A. P. Jackson-Bridwell 1, which failed to produce when drilled through the Canyon series to 2395 feet, is to try for production in the Strawn at the 3600-foot level. Plans are to land a string of 8¼-inch pipe, and deepen with cable tools. It is located 990 feet out of the SWc of lot 129, W. B. Aldridge Survey, abstrict 2, and one mile northwest of the Chalk Hill area.

Two more widely scattered points in Archer County are to be tested for production in the Canyon horizon as result of tests authorized last week. Dan H. Rubsam et al's L. F. Wilson 1, has installed rotary derrick to drill in SWc N½ E½ Section 55, A. T. N.-C. L., and five miles northeast of Chalk Hill. Rubsam et al have an 800-acre drilling block, and have met with success in disposing of protection acreage to other independents. The extreme southeast corner of Archer County is slated to receive a Canyon lime test by the deepening of Kimmell et al's Williams 10, located in the Prideaux shallow pool. The latter had been abandoned at 579 feet, and is now drilling below 800 feet.

Continental Oil Company's C. E. Abercrombie 1, Section 23, Harris subdivision of the Club Ranch, Archer County, is testing out a block of more than 400 acres for the regular shallow horizons, but may be carried on to the Canyon series should the former fail to produce, according to officials of the company.

North and West Texas Field Developments

Completions

CENTRAL WEST TEXAS

Company, Well and Location—	Initial Production Bbls.	Depth
BROWN COUNTY—		
Hayek Oil Co., R. L. Lowe 1	*	1500
Maxwell & Parks, Y. C. Jones 1	*	479
Pann Pet. Corp., Fry 1	*	2105
F. D. Williamson et al, E. H. Cameron 1	*	1333
CALLAHAN COUNTY—		
H. Beams et al, I. N. Jackson 4-D	*	1196
Woodley Pet. Co., E. L. Finley 8-D	*	74
COMANCHE COUNTY—		
Gallagher-Lawson & St. John, Coglen 1,	¶¼	2824
PALO PINTO COUNTY—		
Sinclair Prairie Oil Co., Briggs 1	*	2602
PARKER COUNTY—		
J. O. Kites et al, J. T. Leonard 1	*	435
SHACKELFORD COUNTY—		
Jones et al, W. J. Dodson 2-A	10	710
E. J. White et al, J. D. Smith 1	25	768
STEPHENS COUNTY—		
A. E. Thompson et al, Manning 1	*	3303

WEST TEXAS

CRANE COUNTY—		
Continental Oil Co., Cowden 1-D	200	2482
WARD COUNTY—		
Gulf Prod. Co., G. W. O'Brien 21	100	2765
Moran & Miles, Boogher 1	25	2222

NEW MEXICO

HOBBS FIELD—		
Texas Pacific Coal & Oil Co., State 1-G,	¶8¼	4300 4227

PANHANDLE

CARSON COUNTY—		
Texoma Nat'l Gas Co., Jordan 1-T	¶57½	2435
GRAY COUNTY—		
Continental Oil Co., Carrie Wright 1-A	¶8½ & 880	2864

NORTH TEXAS

ARCHER COUNTY—		
L. T. Burns & Long, Busby 1	*	1505
Wilson 4-R	100	1459
Fain-McGaha Oil Corp., Campbell 1	200	1797
Fee 1-B	45	1795
E. W. Hunt et al, Logan 1	10	1211
Logan 2	*	1198
Petroleum Producers Co., Abercrombie 1-C	*	1400
United Producers Co., Wilson 1-C	*	1510
A. T. Wolfe et al, Mankins 1	*	780
THROCKMORTON COUNTY—		
Suncrest Oil Co., Everett 1	*	4322
JACK COUNTY—		
Brazos River Gas Co., S. A. York 2	200	2883
WICHITA COUNTY—		
Walter D. Cline et al, Parke 1	*	1881
WILBARGER COUNTY—		
The Texas Co., W. T. Waggoner 399	¶1 & 75	1095
WISE COUNTY—		
Giles et al, Cansler 1	*	645
YOUNG COUNTY—		
Chas. Daubert et al, Boswell 1, sec. 1909	*	685
Fifty-Six Pet. Co., Stephens 1	*	3950
N. D. Goldsmith et al, Dunagan 2, sec. 163	60	932
Hamilton & Lee, Bullock 1, sec 344	*	870
The Texas Co., Mullinax 1, sec. 179	*	1004
United Producers Co., Dunagan 2, sec 163	15	938

Wildcat Drilling Report

(Wells shut down not included)

BORDEN COUNTY—Westhyde Investment Co. et al's Looney 1, sp and sd.

BREWSTER COUNTY—C. M. Joiner Pet. Corp.'s W. J. McEntire 1, rig.

COKE COUNTY—Mid-Kansas Oil & Gas Co.'s C. J. Henry 1, dr 2135 ft.

CONCHO COUNTY—Mintex Oil Co. (was W. C. Beasley's) Sam Waring 1-A, sd 1700 ft.

CROCKETT COUNTY—Mid-Kansas O&G Co.-Stanolind O&G Co.-Continental Oil Co. et al's J. S. Todd 1, materials.

ECTOR COUNTY—D. D. Thomas-Jas. L. Green & R. L. York's W. P. Edwards 1, elev 2964 ft, top salt 1715 ft, dr 2185 ft. H. F. Wurtz et al's E. A. Ibbetson 1, elev 2840 ft, top salt 865 ft, top lime 3578 ft, dr 3710 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Mrs. L. Bobadella 1, trace oil 2448 ft, dr 2610 ft.

GAINES COUNTY—A. R. McElreath-F. W. Suggett-Fred Turner et al's J. A. Sparks 1, bad hole 504 ft, changing to rotary.

GLASSCOCK COUNTY—Noel T. Lawson et al's M. M. Edwards-Texas Co. 1, sp and sd. B. C. Mann et al's Mann-Currie 1, elev 2699 ft, top salt 1330 ft, dr 3270 ft.

IRION COUNTY—M. E. Davis-Benedum-Trees' J. D. Sugg 1, elev 2355 ft, fsh tools and bailer 7543 ft. Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, repairing rotary after fire, td 7415 ft.

LOVING COUNTY—Lewis & Slagel Drlg. Co.'s W. D. Johnson 1, elev 2918 ft, top salt 760 ft, sd 2295 ft. H. W. Martin & Fairlawn Synd.'s I. V. Brookfield (320-ac) 1, dr 965 ft.

PRESIDIO COUNTY — Presidio Pet. Co., (Jas. F. Sadler's) R. I. Bledsoe 1, sd 328 ft.

REEVES COUNTY—Rita Oil Corp. (was Cunningham or Talmage et al's) W. M. Wright 1, rig. F. McDorman-S. R. Sharp et al's Roberts-J. J. Shara 1, dr 480 ft.

RUNNELS COUNTY—Blue Bonnett Pet. Co.'s R. M. McMillan 1, sd 1850 ft.

SCHLEICHER COUNTY — Eastland Oil Co., Unit Plan's Joe Tisdale 1, elev 2295 ft, co 5410 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, dr by junk, td 5575 ft.

SCURRY COUNTY—C. A. Seifert & M. G. Dibble's J. M. Blackburn 1, top salt 720 ft, dr 4850 ft. W. S. Guthrie et al's Snyder Nat'l Bank 1, sr 10-inch cas 477 ft.

TERRELL COUNTY—H. H. Sides et al's J. H. Phelps 1, fsh 1530 ft.

WARD COUNTY—Plains Production Co.-Simms Oil Co.'s Benton 1, sd for 10-inch cas 1520 ft. C. L. Renaud & T. M. Prettyman's University 1, dr 650 ft.

SOUTH TEXAS

Second Well in From Crevice in Caldwell County, Near Bob Rose Producer. Rio Grande Field Extended.

EARL POST, *Staff Representative, San Antonio*

Goliad County Wildcats Reach Interesting Depths

San Antonio, Texas.—Goliad County is receiving a rather interesting wildcatting campaign by the major companies.

Humble Oil & Refining Company's M. Fromme 1, G. W. Kersey Survey, several miles north of Goliad, is down 3710 feet and showing nothing particularly promising. Gulf Production Company is below 3850 feet in O'Conner 1, Morris Survey, the first of several wells to be drilled on a 29,000-acre block. The second location is being made four miles east of the first well.

Stanolind Oil & Gas Company and John F. Camp topped the Jackson between 3180 and 3190 feet in Pettus 4, 1000 feet south and 55.5 degrees west of Pettus 1. This well is the first deep operation started in effort to prove up the Cabeza Creek area, which last year showed small production below 4100 feet in the Pettus horizon.

Two Rosita Wells in Sand Promising Production

San Antonio, Texas.—Two wells encountered the sand in the new Rosita field, north of Government Wells field, Duval County, June 16, giving promise of production. In the Sarnosa pool, south of Government Wells, one producer was added during the week.

Magnolia Petroleum Company's Gilbert Wendt 1, survey 44, north offset to the Suttle discovery well, topped the pay at 2319 feet, penetrated it a short distance and started setting casing with making a drill stem test.

One-half mile west of the Suttle well, Southwest Drilling Company's Wendt 1, Section 43, hit the sand at 2297, cored in a few feet and started reaming. Another core will be made before the well is given a drill stem test. Coffield's Wendt 1, north of the Southwest's well and in the same section, was down 2267 feet and will start coring in the next few feet.

To the south of the Government Wells field, the new Sarnosa district has a producer in Magnolia Petroleum Company's Ruiz 1, Section 574, which is flowing 16 barrels an hour through three-eights-inch choke. It topped the sand series at 2373 feet and drilled to 2422. It offsets the recently completed Sun Oil Company producer.

In the main Government Wells field, Duval Oil Corporation is preparing to drill plug in Bishop Cattle Company 11, Section 135, after setting casing on top of the sand at 2292 feet. Humble Oil & Refining Company is near the sand on White 5, Survey 58, also in the main pool.

Duval County's deepest test at this time is Cole Petroleum Company's R. V. Benavides 75, which was coring at 6042 at last reports. It is on Block 8, Section 19, Arispe Grant, in the oil section of the Cole field, opened early in the year by this company at a shallow depth.

Rio Grande Well Indicates 3500-Foot Extension

San Antonio, Texas.—An extension of 3500 feet to the north seemed evident in the Rio Grande City field as a result of the showing obtained in Gulf Coast Oil Company's Frank Doyno 1, which cored sand from 1458 feet to 1468 feet. Elevation is 257 feet, making it about three feet higher than the discovery. This is the first well to be drilled since the discovery test to show signs of production. It is in the south central portion of block 4, share 77, Porcion 81, Starr County.

Heard & Heard drilled Block 1, southeast corner of lot 4, tract 28-A, Porcion 80, one half-mile southwest of the discovery, to 2005 feet, where it was abandoned. The same fate befell Traylor, Munday and Flowers' Goodrich 1, Block 7, Tract 5, Porcion 80, 2100 feet southeast of the discovery, which was stopped at 1550 feet.

Another Refugio Producing Horizon Below 6000 Feet

San Antonio, Texas.—Another Refugio producing horizon below 6,000 feet has been established by completion of Pearson Properties, Inc., in Ryals 2 from a sand at 6606-19 feet, where it is flowing 1200 barrels fluid, 47 per cent salt water and the remainder pipe line oil.

The well is on the west side of the Refugio field, 600 feet from the south and 150 feet from the west line of the lease.

This test originally was drilled to 6614 feet, sidetracked at 5194 feet and drilled to the new level.

Second Well Completed in New Caldwell County Area

San Antonio, Texas.—One crevice gusher, the second for the field, was completed and two more locations made in the vicinity of the Bob Rose Pierce 1, 2½ miles northeast of Luling, Caldwell County. Empire Gas & Fuel Company's W. P. Walker 1, southeast offset to the Rose well, came in from 2393 feet flowing 50 barrels an hour. Casing was set at 1861 feet and crevices were found at 1990 and 2345 feet.

Derricks are being erected for the two new wells by Smilock Oil Company and Trinity Drillers, Inc., both locations being on Dunlap land in the Solomon Seal Survey. The Smilock location is an offset to the Rose well. It is slightly west of north of this well. Trinity Drillers' location is on a 25-acre tract and is northeast offset to the producer. This concern recently acquired one-half interest in the M. O. Rayor (Detroit-Texas Development Company) acreage in this area.

The Bob Rose well has put more than 100,000 barrels of oil into the tanks and has not produced a drop of water.

In the Webster field, a few miles to the northeast and along the same line, Webster Oil & Gas Company finally abandoned the discovery well, W. W. McCrory 1, McNeil Survey, at 2271 feet. This well showed production in the Buda and in the Edwards lime. The casing was shot at the Buda level and the hole subsequently ruined. Casing is being pulled in effort to complete the well in a 600-foot gas sand or a 200-foot water sand. An offset, about 25 or 30 feet away, will be drilled immediately.

Saxet Try for Production At 4800 Feet Is Failure

San Antonio, Texas.—Efforts to establish production at 4800 feet in the Saxet field, Nueces County, again failed when Pat Rutherford gave up J. Hunter 1 as a failure at 4808-13 feet. Casing was set at 4807 feet and the well drilled in, swabbing salt water. This is the same fate that other wells have had in the 4800-foot sand. It has been plugged back to 4100 feet, where casing has been perforated and the well completed as a producer, flowing 300 barrels fluid, 40 per cent of which is salt water.

Gulf Coast Oil Company's Perkins-

Lagasse 1, Section 26, also in the Saxet field, is still running wild from the 1600-foot gas sand, flowing around 30,000 barrels of salt water a day. Casing is set on a sand at 4556-66 feet, which is showing for a producer if the upper trouble is ever remedied.

Webb County Well Marks New Wide Extension

San Antonio, Texas.—Phillip Rosenberg opened a new field or discovered a 3½ mile south extension to the Carolina-Texas field, Webb County, last week in Fee 3. The well was given a drill stem test at 2240 feet, shooting 50 gravity oil over the crown block when the test tool was opened. The oil is much different from the ordinary Mirando crude.

The exact location is given as 150 feet east line and 545 feet from the north line of Block 10, Section 271, just north of the town of Oilton. This is the third well to be drilled by this operator, who has purchased a large portion of the land in fee.

Completion in McMullen Field Makes 75 Barrels

San Antonio, Texas. — Jacob, Buzzini & Pickett, Inc., has completed another producer in its newly discovered field in northwestern McMullen County. Jacob 3-A, 740 feet north and 75 degrees west of Jacob 2-A, is flowing 75 barrels from 951-67 feet. Rig is being skidded to Jacob 4-A, 660 feet north and 660 feet west of 3-A.

Jacob 1-B, a wildcat, 1¼ miles north and east of production, on the Live Oak-McMullen lines, is coring for the first sand at 820 feet. It is on GH&H Section 15.

Farmington, N. M.—A second well in the Delaware lime horizon, deepest producing formation in New Wexico, was in process of completion late last week on Rattlesnake Dome, San Juan County, when Continental Oil Company and Santa Fe Corporation's Munoz Permit 24 swabbed 1000 barrels of 40 gravity oil daily. This well was drilled to 7380 feet, a new record depth for the state, with rotary and plugged back to the Delaware which was passed up at about 6822 feet.

South Texas Field Developments

Completions

Company, Well and Location—	Initial Prod. Bbls.	Depth
BASTROP COUNTY—		
Marts & Beavans, R. L. Carter 1, Geo. Glasscock sur, 3 mi e Elgin	*	2524
BEE COUNTY—		
Slick-Seeligson, Inc., Ray 6, 400 ft n Ray 3, Kerr sur, sw Pettus, top sand 3876 ft	372	3880
CALDWELL COUNTY—		
Empire Gas & Fuel Co., W. P. Walker 1, S. Seal sur, offset Rose gusher, csg set 1861 ft, hit crevices 1990 and 2345 ft	1200	2393
C. J. Webster O&G Co., W. W. McCrory 1, McNeil sur, made producer, shot, ruined hole plug back to water sand abt 200 ft	*	2271
DUVAL COUNTY—		
Cooperative Drlg. Co., Dinn 5, Blk. 5, sur 545	*	1645
Mag. Pet. Co., M. Ruiz 1, Sec. 574, BS&F sur, Sarnosa field, top snd 2373 ft, flow ¾ choke	375	2422
GUADALUPE COUNTY—		
Sal-Mar Oil Corp., A. H. Zunker 1, L. Bolling sur, midway between Seguin and Darst Creek, top chalk 2022 ft, csg set 1995 ft, opens new field	500	2042
McMULLEN COUNTY—		
Jacob, Buzzini & Pickett, Inc., Jacob 3-A, W. H. Jacob sur No. 8, top snd 951 ft	75	967
NUECES COUNTY—		
Rutherford Drlg. Co., J. Hunter 1, Saxet, sand 4808-13 ft, test sw when dr in, plug to 4100 ft, perforate csg, flow 300 bbls fluid, 40% water	180	4813
REFUGIO COUNTY—		
Pearson Properties, Inc., Ryals 2, (wo), w side Refugio, top sand 6606 ft, flow 1200 bbls fluid, 47% sw, ¼ chokes	636	6619
United Prod. Co., Fox 3, Hews & Brown sur, Fox pool, Refugio, (wo), plug to sand 6464-80 ft, flow sw and gas, 1000 lbs. pressure tubing, 1200 lbs. csg, ¼ chokes	*	6620
Fox 5, Hews & Brown sur, Fox pool, Refugio, snd 5842-54 ft, flow ¼ chokes, 175 lbs. pressure tubing, 500 lbs. csg.	265	5886
STARR COUNTY—		
Davenport et al, Wells 1	*	1093
Frank Dawson, R. E. Margo 1, Share 3-B, Por. 70, blk 5	¶¼	352
Heard & Heard, Block 1, se cor lot 4, tract 28-A, Por. 80	*	2005
Hooks & Weaver, Kelsey Bass 6, Sec. 6, Por. 75-76-77, Los Olmos pool	15	480
R. E. Johnston, Fee 1, Share 32, Por. 80	*	1410
Los Olmos O&G Co., A. K. Bass 13, Sec. 7, Por. 75-76-77	15	460
R. H. Pursley, Seabury 2, Share 5, Por. 75, Los Olmos	*	556
Traylor, Munday & Flowers, Goodrich 1, blk 7, tract 5, Por. 80, s Rio Grande City pool	*	1550
ZAPATA COUNTY—		
McGinley Corp., J. Bustamante 1, Comitas sur	*	1820
G. C. Flores 1, sec 250	*	1753
The Texas Co., Jennings 8, Cerrito Blanco Grant, Jennings field	60	1129
O. W. Killam, Fee 5, sur 182	*	1502

Wildcat Drilling Report

(Wells shut down not included)

ATASCOSA COUNTY—Atascosa Oil Corp. 2, Diego Perez survey, to deepen, 2050 ft.

BANDERA COUNTY—F. A. Brown, R. B. Watson 1, sur 70, sp.

BASTROP COUNTY — Campbell & Tong, Yoast 8, Garcia survey, Yoast field, dr 1300 ft.

BEE COUNTY—Humble, Laura Thompson 1, Garrett Roche sur, dr 5635 ft. C. F. Nichols, J. P. Harris 1, Sec. 2, Durango Grant, dr 2700 ft. Texas Gulf Prod. Co., Webb Hearn 1, 1500 ft n Wood 1, P. & T. Irrigation Co. sur. Texas, L. Gremmel 5, Jno. Pace sur, sw Pettus, 400 ft n No. 1, set surface cas, re-dr. United Prod. Co., J. Scott 1, J. Uranga sur, 1 mi s Normanna, dr 4025 ft.

BEXAR COUNTY — American Gas Co., Kennon 5, M. F. Rodriguez sur No. 4, Gas Ridge, fsh 2250 ft. Alamo Nat'l Gas Co., Coreth 1, Menchaca sur, Eckert pool, dr 150 ft. S. W. Blount, Jr., et al, 1-A, Perez sur, fsh 940 ft. Davis, Noble & Bender, S. A. Farms 1, blk 81, dr 1720 ft. Moore & Jauer, Holly Ellison 1, 14 mi w S. A., re-dr 2250 ft.

BROOKS COUNTY—Allen & Morris, Holbein-Wormser 1-A, Palo Blanco de Maguellos Grant, Alta Mesa, dr 720 ft. M. P. Evans, J. M. Martinez 1, La Escantada sur, blk 11, dk. Otto Woods et al, Matilda Martinez 1, Longoria league, 25 mi sw Falfurrias, sp in.

CALDWELL COUNTY—Bobrose Oil Refineries, Walker 2, S. Seal sur, ¼ mile s Walker well, sp in. J. T. Callahan, W. H. Callahan 2-A, J. R. Miller sur, dk. Cole et al, Pierce 1, Seal sur, ¼ mi ne Rose well, dk. George C. Sullivan (Shell) Plimsoll 1, M. W. Dennis sur, dr 3447 ft, soft Taylor. C. J. Webster O&G Co., W. W. McCrory 1, McNeil sur (discovery), td 2279 ft, pull csg, try for gasser abt 600 ft; McCrory 1-A, replacement for 1, lcn; C. T. Robertson 1, ½ mi sw McCrory well, John Neill sur, dk.

COLORADO COUNTY—Coyle-Concord Oil Co., Stewart Nelson 1, I&GN sur No. 43, dr 2235 ft. V. F. Neuhaus Drlg. Co., M. C. Barnett 1, sur 25, Obid K. Winn sur, 5 mi s Sheridan, to sp June 17.

DE WITT COUNTY—Pat Armstrong, E. T. Clark 1, Jose Santos sur, dk. J. F. Richardson 1, Taylor 1, D. Albrete sur, set 350 ft surface csg. Texas, McCrabb 1, at Thomaston, James Quinn sur, dr 4150 ft.

DUVAL COUNTY — A. R. Anderson, E. Riley 1, Sec. 44, dk. Aztec O. & Royalty Co., Duval Co. Ranch Lands 1, Sec. 322, temp. sd 965 ft. R. B. Byrd, P. T. Wright 1, Sur 101, dk. John F. Camp, Weil 2, sw No. 1, sur 57, sp. Coffield et al, Wendt 1, sur 43, 1-a mi w Suttle well, dr 450 ft. Cole Pet. Co. Benevides 75, blk 8, sur 9, Mariano Arispe Grant, Cole Bruni, coring 5986 ft. Frank Gravis, Schallert 3, sur 265, Palangana Salt Dome, dk. Humble, White 5, sur 58, dr 2100 ft. Magnolia, Gilbert Wendt 1, sur 44, n offset Suttle well, Rosita, dr 2260 ft; J. T. Johnson 1, sur. 44, ne Suttle well, lcn. Harry E. Oliver, Wood-Welder 1, sur 213, dk. Pet Finance Corp., C. W. Hahl 1, sec 43, lcn. Plymouth Oil Co., A. Pharr 1, blk 48, San Andres Grant, sp. Southwest Drlg. Co., R. Wendt 1, sur 43, Rosita, sd 100 ft, water. Texas, Peters 1, sur 162, Kohlet pool, ru. E. R. Thomas, Wood Welder 1, sur 383, 5 mi ne Rosita, lcn. Thomas & Tarver, Duval County Ranch Co., sur 576, Sarnosa, lcn.

GOLIAD COUNTY—Gulf, O'Conner 1, Morris sur, dr 2250 ft. Humble, M. Fromme 1, G. W. Kersey sur, 3 mi n Goliad, dr 3397 ft. Slick-Seeligson, Allen 2, Obid Marshall sur, Slick pool, deepen from 4213 ft. Stanolind & Camp, Pettus 4, Cabeza Creek, 2639 ft.

GONZALES COUNTY — Johnson-Mattocks O&G Co., J. James 1, M. A. Williams sur, dr 2340 ft.

GUADALUPE COUNTY—Sun, Bowdy 2, Darst Creek, Jacob Darst sur, dr 1800 ft.

JIM HOGG COUNTY — Clark & Cowden Oil Corp., E. Vela 1, Sec. 573, El Peyote Grant, sp. D. C. DeWitt, T. Gomez 1, Sec. 12, test sw 1457 ft, dr deeper. E. Hough, N. Hinnent 1, Sec. 20, Fensler sur, blk 8, sp. R. L. Huckett et al, F. C. Guerra 1, Sec. 86, blk 6, dr 1825 ft. Rondado Syndicate, Fee 1, Sur 148, Randado Townsite, dk.

JIM WELLS COUNTY—Carroll Brown et al, Doering 1, tract 4-A, Chas. Selfeld Farm lots, 5 mi s Alice, dk. F. A. Lain, V. Poerter 1, tract 25, near Sandria, rebuild dk, td 500 ft. S. J. Sloane, G. W. Wade 1, C. Blanca sur, blk 6, 2560 ft, show gas.

KARNES COUNTY—Pickett et al, Myers 1, 2 mi sw Runge, dr 2100 ft.

KERR COUNTY — Eastland Oil Co., Jeff Love 1-B, Sec. 1594, sp.

LA SALLE COUNTY—Frank Clark, B. K. Coleman 1, No. 514, blk 15, set 40 ft surface cas.

LIVE OAK COUNTY—Catlett & O'Neill, H. D. Miller 1, Wm. Cabbon sur, dr 2628 ft. Live Oak Pet. Co., J. M. Harper 1, J. Portevant sur (taken over from Harper), dr 560 ft.

McMULLEN COUNTY—Jacob, Buzzini &

Pickett, Inc., J. Jacob 4-A, Sec. 8, W. H. Jacob Sur No. 8, Jacob pool, abt 800 ft nw 3-A, skid dk; J. Jacob 1-B, section 15, GH&H Ry. sur, 1¼ mi n and e discovery, coring 820 ft; Jacob 1-C, Sec. 47, J. Pointevant sur, 2 mi nw field, lcn. Longhorn Oil Co. and American Gas Co., Lark 1, E. W. B. Scrughan sur, Calliham field near Live Oak County line, ru.

NUECES COUNTY—Gulf Coast Oil Co., Perkins and La Gasse 1, H. B. Shepherd sur, Saxet field, td 4556 ft, 6⅝ inch cas set 4546 ft, blew in wild from 1650 ft sand, cratered around surface cas, still wild; Elder 2, H. P. Shepherd sur, dr 1500 ft. V. G. Hillegeist, McGregor 1, sur 311, Saxet field, dr 4600 ft. Stanolind, King 2, Sec. 23, King Gas field, td 3922 ft, dst, 300 lbs. 3½ min. on choke.

REFUGIO COUNTY — Humble, H. V. O'Conner 1, J. Keating sur, dr 4738 ft; O'Conner 2, J. Keating sur, dr 4820 ft. Edwin M. Jones, Josephine Mitchell 1-B, Refugio Town Lots, sand 9117-31 ft, set 5 3/16 inch cas, 100 ft screen to bottom, woc. Larcro Gas & Pet. Co., Strauch 5, lot 6, blk 2, Refugio, dr 4225 ft. United Prod. Co., Fox 3, Hews and Brown sur, td 6620 ft, plug to 6480 ft, sand 6464-80 ft, test sw and gas, 1000 lbs. on tubing and 1200 lbs. on cas, ¼ inch choke, sd; Fox 4, Hews and Brown sur, td 6560 ft, plug back.

SAN PATRICIO COUNTY—Atlantic, Welder 4, Welder Gas field, sp.

STARR COUNTY—Allison & Roberts, Kelsey Bass 1, Sec. 6, sp. Coastal O&G Co., Kelsey Bass 1, blk 52, dr 765 ft; Oliverez 1, share 35, Por. 80, to sp in. Day & Co., Kelsey Bass 1, Sec. 6, set cas 478 ft. H. D. Carpenter, Doyno-Chatfield 1, Por. 80, share 21, move on. H. F. Griffith et al, Kelsey Bass 1, Sec. 11, dr 1010 ft. Gulf Coast Oil Co., F. Doyno 1, blk 4, share 77, Por. 81, sp in. P. A. Hoffman, Goodrich 1, blk 6, tract 5, Por. 80, ru. Heard & Heard, Block 1, lot 1, tract 28-A, Por. 80, sand 1546-57 ft, slight show, sd. R. E. Johnston, Fee 1, tract 32, Por. 80, dr 1410 ft. King Pin Oil Co., Lewis 1, Share 22, Por. 80, dk. Frank LaBorde 1, Marrequin 1, tract 20, Por. 75, dr 516 ft. T. C. Patten, Kelsey Bass 1, Sec. 8, to re-dr 1050 ft. R. H. Pursely, Hinojosa 1, Center blk 96, Rio Grande City, lcn. Smith et al, Lopez 1, blk 20, share 65, Por. 80, lcn. Tarver & Nance, Seabury et al 1, tract 21, w ½ Por. 79, dr 600 ft. Taylor-Munday & Flowers, Wood 1, blk 7, tract 5, Por. 80, sand 1370-79 ft, slight show, sd. H. C. Tarter, Gonzales 1, share 62, blk 1, Por. 71-72, lcn.

VICTORIA COUNTY — Cullen & West, Keeran 1, Keeran area, dr 4110 ft. Houston Oil Co., A. M. McFadden 1-A, IR No. 20 sur, dr 4520 ft. Humble, Peter Rydolph 1, McFadden area, Kemper sur, sp in. Texas, A. M. McFadden 4, J. M. Rine sur, McFadden area, fsh 2840 ft. Union Oil Co., Keeran 1, M. De Leon sur, Keeran area, sp. Victoria Oil Co., Keeran 1, M. Leon sur, sand 5334-40 ft, dr out plugs.

WEBB COUNTY—Blair & Livingston, J. M. Garcia 1, sur 11, ru. Frank Clark, Puig Bros. 1, La Albercas Grant, Avertor, lcn. French Oil Corp., R. Benevides 1-H, sur 659, West Cole, dr 1175 ft. McGinley Corp., A. S. Billings 1, Sec. 71, blk 1, CCSD&RGNR sur, dr 2100 ft. Phillip D. Rosenberg Green 2, Sec. 233, sd 3080 ft; Fee 3, blk 10, Sec. 271, 3½ mi s Carolina Texas, td 2240 ft, shot 50 gravity oil over crown block. Tompkins & Edwards, Ortis 1, Sec. 1808, GC&SF sur, dr 1000 ft.

WILSON COUNTY—A. M. Blume, Nichelson 1-A, C. Diaz sur, move on. Sun, Tudyk 1, John Turner sur, nw part of county, unit block, sp.

ZAPATA COUNTY — Ballard & Mercer, Flores 1, blk 27, Por. 37, sand 2441-46 ft, recement cas, woc. H. H. Coffield, S. Bustamante 2, Fansler sur No. 34, dk. Bustamante 3, lcn. Joe Cullinan, Gutierrez 1, Charco de la India Grant, dr 625 ft. Donchoo, Stevens & Brown, A, Garcia 1, share A, blk 7, C. Redondo Grant, sp. Hunt & Polk, Ramirez 1, share A, Villa Grant, dr 675 ft. O. W. Killam, Hinnant 1, blk 45, sur 613, Mirando Valley, dk. L. G. Smith, M. G. Martinez 1, blk 18, share B, W. R. Duke sur, dk. Windsor Oil Co., Martinez 1, blk. 14, Charco Redondo Grant, dr 100 ft.

GULF COASTAL FIELDS

Montgomery County Area Appears Assured Important Producing Field; Rabb Ridge Extended 800 Feet.

WM. V. GROSS, *Staff Representative, Houston, Texas*

1400-Barrel Well Extends Rabb Ridge 800 Feet North

Houston.—Gulf Production Company and Humble Oil & Refining Company effected an 800-foot north extension of Rabb Ridge oil field in Fort Bend County June 16 when F. I. Booth Estate A-1 was brought in flowing at the rate of 60 barrels per hour through three eighths-inch choke carrying a pressure of 630 pounds. Five joints of strainer were set on bottom at 5150 feet to get the 25.3 gravity oil.

F. I. Booth Estate 1 is a direct north offset to the same operators' T. R. Booth 1, and is located 445 feet north of the south line of a 1100-acre tract. Completion of this well as a 1440-barrel producer brightens somewhat the prospects of The Texas Company's Wolters 1, drilling near 4000 feet on a location about 2300 feet further north.

The next completion at Rabb Ridge probably will be Gulf-Humble's George B-1, which was drilling below 5250 feet in oil sand June 17.

Eight wells drilling in the field assure activity there throughout July.

San Antonio, Texas.—T. B. Slick Estate has another producer in the Southwest extension pool at Pettus. It is Ray 6, 400 feet north of Ray 3 in the George A. Kerr Survey. The well is flowing 300 barrels from a sand at 3876-80 feet.

The Texas Company's Gremmel 5, John Pace Survey, direct west offset to this well was last reported making hole at 3220 feet.

Texas Company Quits Belcher 2 at Manvel

Houston.—After several unsuccessful attempts to make a commercial producer out of Belcher 2, The Texas Company's efforts to extend production in Manvel field southeast of the discovery well 1000 feet ceased this week with abandonment of the well at the plugged-back depth of 5576 feet. It had been drilled to 6056 feet.

Belcher 2 originally was completed at 5602 feet for 1750 pounds of gas and about 40 barrels of spray oil. It soon sanded up and was deepened to 5685 feet, where as much as 430 barrels per day was recovered for a brief period. This amount gradually decreased until a decision to deepen the well was made. Deepening to 6056 feet availed nothing.

The company's next move for production at Manvel, Brazoria County, will be northwest from the discovery well 450 feet, the site chosen for Belcher 3. Rig for drilling this test is being moved over from No. 2.

Preparing to Make Test in Guadalupe County Area

San Antonio, Texas.—Sal-Mar Oil Corporation was cleaning out A. H. Zunker 1, Guadalupe County wildcat, and running tubing, preparatory to making a production test. This well definitely opened a new Austin chalk field midway between Darst Creek and Seguin June 12 when it flowed about 500 barrels initial from 2042 feet. The production estimate when finally completed is expected to be considerably higher.

The exact location is 400 feet from the west line and 170 feet from the south line of the 101.5-acre tract in the L. Bolling survey, 3000 feet east of the company's Pfallman 1, which was abandoned in the Edwards as a dry hole.

This test recently encountered Austin chalk at 2022 feet, drilled into the formation 20 feet and set casing at 1995 feet. Depths corrected. This company owns 3400 acres around this well, although some choice acreage is held by other operators.

Ritz-Garrett-Decker Area Loses More of Its Market

Wichita, Kansas.—Due to reductions in pipe line nominations, allowable production in the Ritz - Decker - Garrett area, McPherson County, was reduced 1.7 per cent June 15. As the reduction in nominations was made by a purchaser who has purchased the largest amount from the Viola lime area, nominations in the chat area were not affected and operators will be allowed to continue to produce eight per cent of potential until further changes are necessary. Viola lime production is reduced from 8 to 6.3 per cent of potentials.

Montgomery County Has Every Promise of Important Production
(Continued from page 17)

considerable importance to Beach as a future source of crude. The line, which will be 27 miles long, will join the Humble's Mexia-district trunk line to the coast.

Heep Oil Corporation and Houston Oil Company, jointly interested in leases on the Cartwright, Brent and Hamman tracts, have been discussing with Sinclair Prairie Pipe Line Company the advisability of having the latter as a common carrier, move Heep's production from Beach to a point near Houston. Sinclair Prairie's line is the old, looped, eight-inch line of Pure Oil Company of Texas which formerly was used to carry oil from Mexia to Beaumont. It passes near Beach. The negotiations on this matter are only in preliminary stages.

However, Beach is situated in or near a veritable nest of trunk lines from East Texas to the coast, so outlets will not be lacking. On the other hand, it is close enough to tidewater for a group of independents to build their own line without using as much pipe as the average gathering system in the East Texas field requires. Any major that has been able to get by in East Texas without laying 150 miles of gathering line comes under the classification of "rare, rare exceptions."

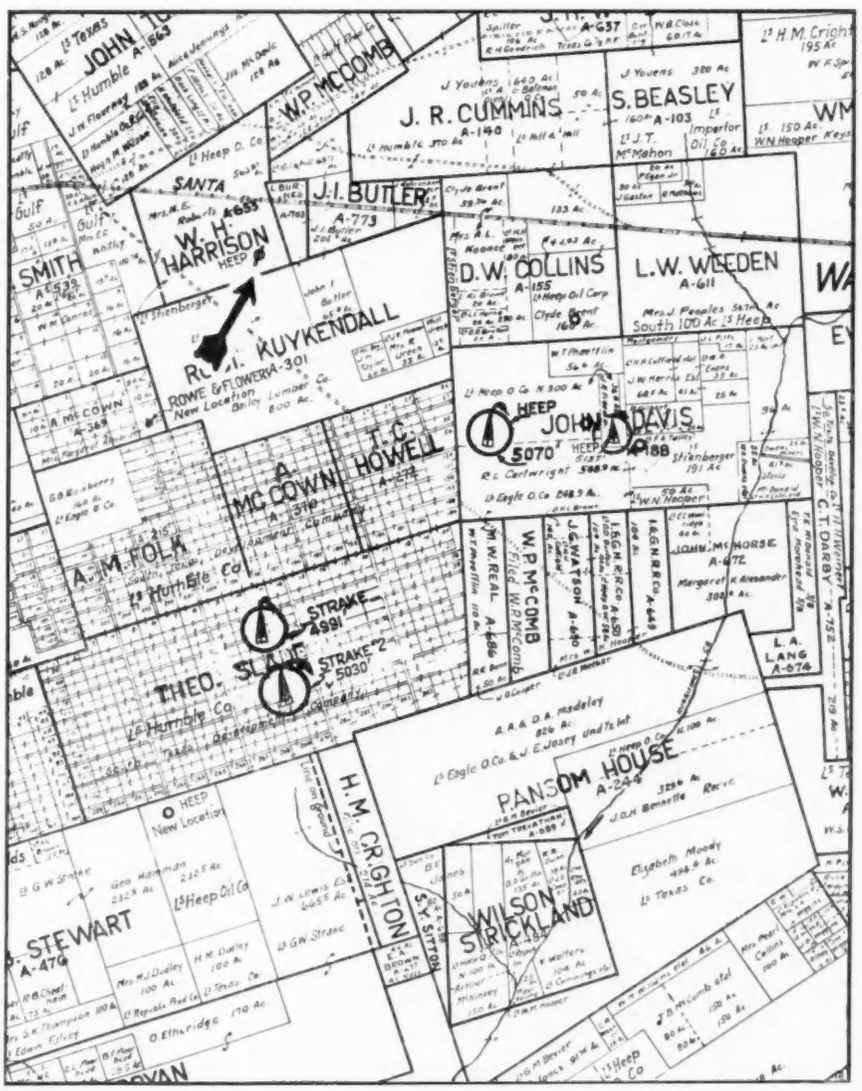
Possibly the most important development this week in the area was abandonment of Heep Oil Corporation's Mrs. M. E. Roberts 1 in a salt water sand at 5283 feet, killing for the present attempts to extend the field north. This well is 10,500 feet almost due north of the discovery well, which, incidentally, is the most westerly producer in the field. Abandonment of the Roberts well leaves Rowe and Flowers' Mrs. M. H. Alexander 1 the only drilling well north and in the immediate vicinity of the discovery well. This latter well, drilling near 2000 feet, is about 6500 feet north of northwest of the original Strake producer. Its successful completion would tend to substantiate the shoreline nose theory with reference to the probable trend of production, although it is not likely any wells will be spudded between the Rowe and Flowers test and Heep Oil Corporation's Roberts 1 until completion of the former.

A line drawn north and south through the discovery well, (Strake Oil Corporation's South Texas Development Company 1) gives the field a 2200-foot north and south extent on the western edge, while the north and south distance at the eastern edge, represented by a line drawn north and south through a point midway between Heep Oil Corporation's Cartwright 1 and Freeman 1, gives it about 1000 feet width at the eastern edge. From east to west, the field is 12,000 feet long, or better than two miles.

In the event Heep Oil Corporation's location on the Hamman tract results in a producer, an additional 3500 feet will be added to the north end south length of the western boundary, while another location announced by the same operator this week in the southern portion of the C. Brent lease in

Completed Wells in Beach, or Conroe Area of Montgomery County

Company—	Well	Direction and distance from discovery well	Initial production (barrels)	Top sand (main sn)	Total depth
Strake Oil Corp.	So. Tex. Dev. Co. 1	Discovery Well	200	4981	4991
Strake Oil Corp.	So. Tex. Dev. Co. 2	South 2200 feet	1164	5002	5026
Heep Oil Corp.	R. L. Cartwright 1	East of NE 8500 ft.	125	4970 broken formation	5078
Heep Oil Corp.	J. R. Freeman 1	*N. of E. 12,000 ft.	1100	5100	5121
Heep Oil Corp.	Mrs. M. E. Roberts 1	N. 10,500 ft	dry	....	5382
Smith & McDaniels	Sealy 1	N. of NE. six miles	dry	....	5010



Arrow indicates dry hole drilled in the new Montgomery County field by Heep Oil Corporation in an attempted 10,500-foot northerly extension. Map courtesy of Conroe Map & Blue Print Company, Conroe, Texas.

the D. W. Collins Survey would effect a northeasterly extension of nearly a mile. Inasmuch as these two wells are reputed the most "likely" locations drilling, their progress will be closely watched, the Hamman by those contending the better play will be south of the discovery well, the Brent by those still holding the theory that production will trend northeast-southwest.

Rowe and Flowers are drilling another well on Varner Realty Company holdings on the Houston highway about 3½ miles west of northwest of the discovery well. This test, near the 2500-foot mark, should reach a significant depth in two or three weeks, but being so remote from present production, is not expected to cast a damper on additional drilling between it and the discovery well should it turn out a dry hole, a possibility which has been freely predicted. Eagle Oil Company, G. W. Strake in person, Eagle Oil Company and Strake Oil Corporation are among those who hold leases between Varner Realty Company 1 and South Texas Development Company 1.

Leases are changing hands so rapidly within a radius of three miles of the discovery well that it is practically impossible to keep an ownership map posted to within three days of date, except with reference to the larger blocks, most of which are involved in being transferred and are pending title examination. A survey of that portion of the map of the area which accompanies this article will reveal Rowe and Flowers (Humphreys Corporation), Heep Oil Corporation, Eagle Oil Company, Gulf Production Company, The Texas Company, Sun Oil Company, Humble Oil & Refining Company as principal lease holders. The following tabulation gives, roughly, the company and the approximate amount of acreage held at Beach, together with a designation of directions from the discovery will in which this acreage is located.

Company	
Rowe and Flowers (Humphreys Corporation	200 acres, north
Heep Oil Corporation	232 acres, south, 1870 acres, east, southeast and northeast
Eagle Oil Company.	1100 acres, east and southeast
Gulf Production Company	400 acres northeast and 148 acres northwest
The Texas Company	1200 acres, southeast, east and northeast, and 450 acres, southwest west and northwest.
Sun Oil Company.	1000 acres, southeast, east and northeast, and 280 acres northwest
Humble Oil & Refining Company (pending & bought)	6000 acres, north, south, east and west, but most of it north, northeast and west
C. C. Steinberger	300 acres, north and east.

Missing from the above picture of lease holdings is Atlantic Oil Producing Company, with which Herman Heep, president of Heep Oil Corporation, discussed sale of his corporation's holdings in the field last week. Atlantic Pipe Line Company has a line from East Texas to the Gulf Coast which figuratively splits the field wide open. Oil produced from Beach is probably very attractive to Atlantic Oil Producing Company from this angle, even though the product were purchased from other producers. It probably would be more attractive if the company produced it, especially if an arrangement could be made with Houston Oil Company, Heep's operating affiliate, to dispose of the output of any strictly gas wells that might be brought in. Gas reserves of Houston Oil Company and its subsidiaries and affiliates are not too great to condemn a policy of increasing them.

Drilling that will be done in Beach during the next year will offer a marked contrast to that which has been done in East Texas during the past 12 months. In the latter, a driller goes into a trance from the time he spuds till the producing horizon is tapped, to quote the parlance of a roughneck home on vacation from there. In Beach there are greater pressures to contend with. There is a 5100-foot horizon to be reached instead of one less than 4000 feet below the surface. Heavier equipment and fittings will be called for. Screen will have to be used, and in general, the wells will cost more per foot for labor and equipment.

GEORGE I. LYNCH is now making the rounds in the Gulf Coast for the Lee C. Moore & Company, having been recently transferred from Pittsburgh. Mr. Lynch will maintain offices in the Post-Dispatch building at Houston.

Gott WATER CANS & COOLERS
Pure... clear drinking water
When you have a GOTT Water Cooler handy, you will always be assured of a fresh supply of pure drinking water kept delightfully cool. Order one from your supply store... now!
Gott
GOTT Water Cans 1 gal, 3 gal, 5 gal and 10 gal
GOTT Water Coolers 3 gal, 5 gal, 8 gal, 10 gal and 20 gal
GotkooL
H.P. GOTT MFG. CO., Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY

Gulf Coast Field Developments

Completions

TEXAS GULF COAST

Company, Well and Location—	Initial Bbls.	Depth
BEACH FIELD (Montgomery County)—		
Heep Oil Corp., Freeman 1	1100	5121
Mrs. M. E. Roberts 1	*	5382
Smith & McDaniels, Sealey 1	*	5010
HUMBLE FIELD—		
E. M. Wilson Oil Co., W.&P Fee 9	50	1487
J. H. Burt & Jno. Deering, C.O.&G., Texaco Fee	135	1500
RABB RIDGE—		
Humble Oil & Ref. Co. & Gulf Prod. Co., H. P. Lockwood 3	1300	5323
MANVEL FIELD—		
The Texas Co., Belcher 2	*	5575

LOUISIANA GULF COAST

JEFFERSON ISLAND—		
Jefferson Lake Oil Co., Lake Peigneur 35	*	760

LOUISIANA FIELDS

Sixteen Locations Made in Zwolle Area Where Every Location is a Wildcat. Test East of Sabine Uplift.

Staff Correspondent, Shreveport, La.

Two Tests Planned on East Flank of Sabine Uplift

Shreveport, La.—Two wildcat tests for the east flank of the Sabine Uplift and the "trough" lying between it and the Monroe Uplift, were announced during the last week. Tex Lloyd has blocked 15,000 acres of leases in Winn Parish and made location for J. B. Milam 1, NW SW Section 28-13-3w. In Bienville Parish, Black Lake Development Company has spudded Frank Holston 1, SE SE Section 17-18-6w. The latter test is well to the north of the east flank of the Sabine Uplift while the former is in the "trough" between the Sabine and Monroe Uplifts and north of the Angelina-Caldwell Flexure which runs northeast-southwest in that general area.

Shelby County Gas Well Put Back on Production

Shreveport, La.—General Minerals Corporation's Pickering 1, C. F. Henry Survey, Shelby County, Texas, near Tenaha, is again producing gas, after being dead for some time due to the valve stem of the bottom gate valve twisting off with the valve in a closed position, with 1400 pounds pressure against it.

Southern States, Incorporated, drilled a 2½-inch hole under pressure, through the valve discs, allowing the well to feed gas through the 2½-inch opening, which is sufficient, it is stated, to take care of all its needs.

This well supplies gas to the town of Tenaha and to a drilling test nearby. It blew in suddenly last summer at 3864 feet and ran wild for several weeks before being brought under control. No more gassers have so far been completed in that territory. Its initial yield was variously estimated at 10 to 25 million cubic feet.

Spotted Condition Does Not Stop Drilling at Zwolle

Shreveport, La.—Sixteen new locations were announced for the Zwolle district, Sabine Parish, during the week ending June 15. Six of the new tests were for the southwest offshoot of the townsite part of the field which is the most active of the area, despite a shortage of water felt by several operators in that sector.

The fact that the chalk and marl producing horizon in Zwolle is so erratic in production, dry holes offsetting producers and vice-versa, probably will not affect drilling north of the "hot spot" of production in Sections 1-, 2- and 3-7-13, although just across the township line to the north, two dry holes were completed last week. These abandoned tests are Lowery and Green's Martinez 1, SE SE Section 34-8-13, and W. M. Coats' Stille 1, SE SE Section 35-8-13. These are the first completions to the north of the township line since the new "hot spot" was opened.

R. L. Gay, Trustee's Long-Bell A-1, NW NW Section 10-8-13, five miles north of Zwolle, the deepest hole ever drilled in Sabine Parish, on June 15 was coring shale and lime at 5802 feet.

Shreveport Geologists Visit Southeast Area

Shreveport, La.—Twenty-seven geologists made the Shreveport Geological Society's annual field trip on June 10-11. The trip started from Jackson, Mississippi, and concluded at Jackson, Alabama, returning via Meridian, Mississippi. The party visited Tidal Oil Company and associates' test in Clarke County, Alabama, and made a boat trip along the Tombigbee River studying faults in the banks. A number of interesting outcrops were also visited.

The party was headed by William F. Chisholm of Shreveport, president of the society. The trip was made by bus.

North Louisiana Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
SABINE PARISH (Zwolle)—		
W. M. Coats, Stille 1, 35-8-13.....	*	2467
Pelican Nat. Gas Co., La. Long Leaf 14, 10-7-11	*	2592
Lowery & Green, Martinez 1, 34-8-13	*	2462

New Operations

CAMERON PARISH—Pop Oil Co., Lake Charles, J. C. Ellender 1, 19-12s-10w, 617 ft n and 931 ft w se cor ne¼.

OUACHITA PARISH—J. J. Potts, Agt., Monroe, Robertson-Reed 2, 11-18n-4e, 531 ft n 825 ft e sw cor sec.

SABINE PARISH—Smith & Johnson, Shreveport, Peter Sepulando 1, 4-7n-13w, 250 ft w 230 ft n se cor sec. Mrs. S. B. Brooks & Bill Deson, Shreveport, G. Mooney 1, 35-8n-13w, 330 ft s and 330 ft e nw cor sec. Howard Dooley, Shreveport, Anna Williams 2, 13-7n-11w, 416 ft s and 344 ft e nw cor ne¼ sw¼ sec. J. B. Hughes, Many, Stille 1, 36-8n-11w, 283 ft n and 383 ft w se cor se¼ sw¼ sec. Cliff Q&G Co., Inc., Shreveport, Cliff 1, 4-7n-13w, 660 ft n and 105 ft w se cor ne¼ se¼ sec. A. F. Tarver, Shreveport, R. Stoker 1, 34-8n-10w, 1320 ft s and w ne cor sec. Service Drlg. & Roy Corp., Gardner A-2, 12-7n-11w, 330 ft n and 360 ft e sw cor ne¼ ne¼ sec. Howard Russell, Shreveport, J. M. B. Porter 1, 7-7n-11w, 680 ft n 230 ft w se cor sec. W. S. Smith, Tr., Shreveport, Hamilton 1, 32-8n-11w, 330 ft n and e sw cor ne¼ ne¼ sec. Frank Melat, Shreveport, Davis 1, 2-7n-11w, 175 ft w 225 ft w ne cor sec. F. N. Burke, Zwolle, Ozella Gray 1, 3-7n-13w, 352 ft n 330 ft w se cor s½ sw¼ sw¼ sec.

Wildcat Drilling Report

(Wells shut down not included)

BIENVILLE PARISH—Black Lake Dev. Co., Frank Halston 1, se se 17-18-16, sp 10-in 24 ft.

CADDO PARISH—Jno. W. Moffitt, Cynosure 1, 36-18-15, lcn.

CALDWELL PARISH—Carter Bell et al, A. R. Taylor 1, 17-14-4e, dr 3480 ft lime.

DESOTO PARISH—J. M. Bridges, Joiner 1, nw nw 33-11-12, dk. E. T. Oakes, Johnson 1, 30-13-15, core 3661 ft. DeSoto Dev. Co., Nickie 1, 7-13-12, dk. Donly Bros., H. Smith 1, 31-14-15, sr td 2295 ft. Standard Oil Co. of La., Sutherlin 1, 19-12-14, cemtd 6⅝ cas 2735 ft td 2782 ft. S. A. Guy, Dowling 1, 31-14-14, top chalk 1650 ft dr chalk 2125 ft. Coker et al, Boone 1, sw nw 12-10-11, dk.

GRANT PARISH—Security Pet. Corp., Swope 1, 16-9-1e, wosr td 1585 ft. Robichaux et al, Bradford 1, 16-9-1e, dk.

NATCHITOCHES PARISH—Southland Drilling Co., Ross Olive 1, 10-9-10, dr 1575 ft. Dr. H. S. Gerson et al, Smith 1, 11-10-8w, sd 1875 ft. Smith 3, 6-10-8w, lcn. H. W. Perritt, Brown Lbr. Co. 2, 29-8-9, dr 2316 ft. Cook 1, 3-8-9, cemtd 6⅝ cas 2467 ft bailed dry td 2482 ft arr deepen. Rains et al, Beard 1, 8-8-10, dk. Texana Oil Co., Clarke-Morse 1, 23-5-6w, sr td 2504 ft.

RED RIVER PARISH—C. F. Davis, Peterson 1, sw nw 12-14-11, dk pat. Petroleum Industries, Inc., Madden 1, sw ne 21-14-10, sp.

SABINE PARISH—J. J. Kean, Belton 1, 31-9-13, elev 232.7 ft bailed oil and sw after recementing plug that gave way after plugging back from 3128 ft to 1600 ft arr recmtn plug. R. L. Gay, Tr., Long-Bell A-1, nw nw 10-8-13, core shale and lime 5802 ft. J. H. Askew, Sabine 1, ne nw 9-7-13, sd for water, 2285 ft. Geo. LeGrand, McGowan 1, nw nw 2-8-10, sd 2000 ft. Loring Oil Co., Bowman-Hicks 18, 15-7-12, flowing sw (172 degrees), wo baroid, td 5272 ft. State Prod. Co., Davis 1, 17-7-10, 6-in 2638 ft. Davis B-1, 17-7-10, dk. King, Tr., Davis 1, 29-7-11, lcn. G. E. Jordan, Dew 1, sw se 34-8-11, dk pat. C. H. Tuttle, Byrd 2, nw nw 7-7-10, dr 2275 ft. R. E. Davidson, Davis 1, 28-7-11, dk. S. A. Lane et al, DeKeyser 1, nw ne 23-7-11, dr 1800 ft. Covington, Clark et al, Bill Bray 1, se nw 32-7-11, lcn abn. Supreme Oil Co., Pruitt 1, se sw 30-8-11, dk. Broderick & Calvert, Costullo 1, se nw 2-7-14, elev 174 (corrected), top Zwolle marl 1956 ft. (S.L.M.), cemtd 6⅝ cas 1956 ft dr 2195 ft chalk. A. F. Tarver, Stoker 1, 34-8-10, sp 10-in 105 ft. N. A. Sims, Peterson 1, se nw 34-7-13, lcn. Howard Russell, Porter 1, se se 7-7-11, rig. J. H. Reeves, Sabine Bank 1, ne sw 28-8-11, dk. A. A. Trammell, Supulvedo 1, nw ne 5-7-13, dk. J. B. Hughes, Stille 1, 36-8-11, rig. W. S. Smith, Tr., Hamilton 1, ne ne 32-8-11, lcn. McCormick et al, Pate 1, 32-8-11, lcn.

VERNON PARISH—Llano Cooperative Colony, Fee 1, nw ne 34-2n-9w, sp dr 50 ft.

WINN PARISH—Tex Lloyd, J. B. Milam 1, nw sw 28-13-3, lcn.

NEW MEXICO . . . ROCKY MOUNTAIN

Hobbs Wells Can Control Water Instrusion by Holding Flow Below Low Allowable. Utah Wildcats Get Active.

Staff Correspondent, Casper, Wyoming

Eastern Utah Wildcat Drilling Gets Underway

Salt Lake City, Utah.—Wildcat wells in Utah got under way the first of the month in the eastern part of the state. In Grand County, in the southeastern sector, the most interesting well now under way is that being drilled by Utah Southern Oil Company on NE NE Section 31-23s-21e, on Salt Valley structure. The last report stated that the well had been drilled past lost tools to 5368 feet, lost bits cemented off to prevent their falling into the hole, and operation shut down to let cement set. Formation is still salt, beneath which the company hopes to find oil production in the lower Pennsylvanian series. Brendell Oil & Gas Company's well, NE Section 9-22s-19e, on an oil placer mining claim, also in Grand County, is drilling below 600 feet. In Summit County, east of Coalville, Longwell Petroleum Company's wildcat, SE Section 35-3n-5e, is drilling below 300 feet. In Utah County, Diamond Oil Company, Diamond Fork structure, NW Section 16-8s-5e, is ready to test an oil showing encountered at 3535 feet.

Sulphur Water Advance in Hobbs Area Continues

Hobbs, New Mexico.—The sulphur water horizon on the west flank of the Hobbs field continues to advance upon the structure, and attained a new high level when Gypsy Oil Company's W. D. Grimes 6, located in the SEc W½ Section 32-18s-38e, began showing 10 per cent b.s. and w., while restricted to its proration allowance of 234 barrels oil daily. This well is bottomed at 540 feet below sea level, and is the highest structurally of any of the 21 wells that have shown water in the field. Some of these wells that have made cut oil have returned to pipe line oil by sacrificing on proration allowance. Walker Oil Corporation's Terry 2, located on the lower end of the field, is returned to pipe line oil production recently while making its allowance, although it developed 65 per cent cut oil and went dead when given open tubing flow test late in May to determine new potential rating.

Texas Pacific Coal & Oil Company's State 3-G, located near center of SE Section 24-18s-37e, afforded a minor extension to the northwest side of the Hobbs structure with an official open tubing and casing rating of 3758 barrels of oil and 8,626,000 cubic feet gas from regular lime at 4095-4227 feet.

A new test for the north end of the Eunice area, Lea County, is to be started shortly by Tidal Oil Company and Devonian Oil Company in compliance with an old lease obligation.

Four Wildcat Operations Underway in South Dakota

Belle Fourche, S. D.—At least four wildcat operations are under way in the western part of South Dakota on four different structures. J. H. Voorhees interests have started upon the Crow Creek structure, SW SE SE Section 35-9-3, Butte County, five miles east of Belle Fourche. On the Camp Crook structure, Baker Exploration Company of Baker, Montana, is resuming its operation on the Holman ranch, bottomed in the Judith River formation which is reported to be gassing considerably. On the Barker structure, which was so active in 1929-30, Barker Drilling Company's No. 3, Section 34-6s-2e, 17 miles southwest of Hot Springs, has set casing at 1085 feet and should resume drilling immediately. On the Shiloh structure, 20 miles southwest of Hot Springs, the Lakota Development Company is resuming its wildcat well which has been standing for the last two years with eight-inch casing set at 2000 feet, presumably on top of the Minnelusa formation.

Two Wells Get Underway In North Casper Program

Casper, Wyo.—Lakota Oil & Gas Company, which has a program of 10 wells to be drilled this summer to the gas producing sand in the North Casper Creek field, 25 miles northwest of Casper, has two operations under way. No. 4 well is drilling below 1100 feet after having set casing at 1000 feet, and No. 5, on top of the structure, has rig up and should be ready to spud before the end of this week. The company is dealing now with the city of Casper to furnish it with its natural gas requirements in the event that city completes its negotiations to take over the distributing system within the corporate limits from New York Oil Company.

New Mexico and Rocky Mountain Field Developments

COLORADO
Wildcat Drilling Report
(Wells shut down not included)

ADAMS COUNTY—Hills Dome Lease Dev. Co., se 27-3s-54w, stand cem. 4025 ft.

ARAPAHOE COUNTY—McDeb Drlg. Co., Fitzsimons 1, 7-4s-68w, sd 6100 ft (cor.)

ARCHULETA COUNTY — Oil City Pete Co., Fitzhugh 1, sw 34-33n-13, sd for pipe, gas showing 717 ft.

EL PASO COUNTY—Gulf States Oil Corporation, Carson 2, ne 10-16s-66w, 8¼ inch at 2000 ft.

GRAND COUNTY—Oil & Mineral Lands, Inc., McElroy 1, se sw 14-2n-81, resuming at 618 ft.

JEFFERSON COUNTY—Ruby Hill O&G Co., Braden 1, se 24-4s-69w, waiting 4¾ inch 4280 ft.

LA PLATA COUNTY—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, rig up. Phipps et al, sw 9-33-13, td 520 ft.

LARIMER COUNTY—Mayer et al, Reed 1, nw 28-4-60, fsh tools 3800 ft.

MONTROSE COUNTY—Uncompaghre O. & G. Co., Vandemark 2, 27-50n-10, prep to res at 800 ft.

MONTEZUMA COUNTY—Oliver, Downey, Smith et al, nw ne 31-36-17w, rigging up.

PARK COUNTY—South Park O&G Co., Milligan 1, se 13-8s-76w, cem cave and sd 2912 ft. South Park Oil Co., Esche 1, ne 5-9s-76w, sd 2470 ft.

RIO BLANCO COUNTY—California Co.'s Raven 1, se 20-2n-102, dr 5323 ft. Magnolia Pete Co., Maddock 1, nw se 9-2s-96w, dr out cement 2417 ft.

WELD COUNTY — Tulsa-Ft. Morgan Oil Co.'s Anthes 1, ne ne 24-8n-59w, dr 1600 ft. Weld Royalties Co., se 29-9n-61 20¾-inch set at 89 ft. Ohio Oil Co., Butters 1, 7-6n-60w, rig up. Reiter-Foster, Johnson-Juhl 1, se 14-6n-61w, ready to shoot base Niobrara at 6263 ft.

MONTANA
Wildcat Drilling Report
(Wells shut down not included)

BROADWATER COUNTY—Capitol O&G Co., nw 7-8n-1e, dr below 2200 ft.

CARBON COUNTY—Corbett Royalty Co., sw se 1-16s-23e, dr 1160 ft. Jack Creek O&G Co., se 15-7s-23e, rigged and ready to spud. Midland Oil Co., nw 24-6s-23e, small showing oil, dr ahead 1150 ft. Ohio Oil Co., Kutchinski 1, 15-7s-21e, will probably abandon.

CARTER COUNTY—E. T. Moorehead, sw 34-4s-57w, wait for 12½-inch at 350 ft.

CASCADE COUNTY—Buscher & Cassady, Johnson 1, se 19-22-3e, waiting for Merz test, td 1387 ft. Charles Merz et al, Sheffels 1, nw 4-21-4e, standing 1350 ft.

FALLON COUNTY—H. W. MacDonald's 1, sw 28-8n-60e, dr 1755 ft.

FERGUS COUNTY—Melton Corporation's 1, sw 24-21n-17e, dr and carry 8¼-inch 3150 ft. Landheim-Romunstad 2, ne 3-17n-20e, set 6⅝ inch at 2116 ft, td 2600 ft.

GALLATIN COUNTY — Montana Gas & Pete Corp., Adams 1, 35-1n-2e, refinancing, td 1650 ft.

GLACIER COUNTY—Finn et al, McLellan 1, 12-34-6w, rig up waiting for financing. Blackfeet Petroleum, ne 28-36-12w, rig up to resume 2947 ft. Jeffries et al, se ne 17-31n-12w, prep to move in standard tools, td 2980 ft. Tarrant et al, Hagland 1, nw se 13-34-6w, ready to dr in 2835 ft. Browning Development Co., Reickhoff 1, ne 3-34-6w, rig up.

GOLDEN VALLEY COUNTY — Golden Valley Oil Co., 2-6n-22, dr below 3335 ft.

LIBERTY COUNTY — Whitlash Petroleum

Co., Hicks 1, nw ne 26-37-4e, dr 500 ft. Oiens et al, Hicks 1, se ne 26-37-4e, mvg in. R. C. White et al, Hicks 1, ne ne 27-37-4e, moving in. Teter & Strawn, Shafer 1, sw sw 24-37-4e, mvg in. Postlewaite et al, sw ne 26-37-4e, moving in. A. E. Crumley, Strode 1, nw ne 35-37-4e, mvg in. Northaldn O&G Corporation, Yurman 1, sw 32-33-5e, prep to res at 2815 ft. Peoples O&G Co., nw 17-36-6e, dr below 2000 ft.

MUSSELSHELL COUNTY — Minnesota-Flatwillow Pete Co.'s 1, sw 7-11-31e, dr 2562 ft.

PHILLIPS COUNTY—St. Cloud O&G Co., sw ne 20-24n-24e, dr 150 ft.

PONDERA COUNTY—Bell-Adams' Venetz 1, ne 31-27-4w, repairing boiler, will dr water well 920 ft.

SWEETWATER COUNTY—Shoshone Consolidated Oil Co., nw nw 23-2n-15e, ur 5785 ft.

TETON COUNTY—California Co.'s Sullivan 1, nw 34-28-7s, dr and carry cas bel 2930 ft. Earl Oil Co., ne se 22-22n-8w, to res at 3860 ft.

TOOLE COUNTY—Oregon Syndicate, se 20-36-2e, try to pull cas to plug back from 2580 ft. Texas Co.'s International Land 1, se sw 6-36-4w, cem 13⅜ inch at 504 ft.

VALLEY COUNTY—Opheim O&G Co., ne 28-37n-38e, mvg in.

YELLOWSTONE COUNTY—Spokane-Laurel Oil Co., sw se 30-2s-24e, standing for orders 580 ft. Peter Antonioli, ne ne 2-2n-25e, wait for casing 2370 ft.

NEW MEXICO

BERNALILLO COUNTY—Norrins Realty, Pajarito Grant 1, 22-9n-1e, fsh cas 1295 ft.

CHAVES COUNTY — Warman Oil Trust, Evans 1, 15-14s-25e, dr 1320 ft. R. D. Compton, sw se 20-10s-24, spd and sd.

CURRY COUNTY—G. L. Trout, 24-2n-31, abn 958 ft. Southwest Oil Production Co., 15-5n-33.

DE BACA COUNTY—Montgomery et al, Wood 1, sw 6-4n-20e, fsh tools 4662 ft. Landowners Oil Co., State 1, ne 16-1s-27e, dr 4850 ft.

DONA ANA COUNTY—Middle States O&G Co., Boretzi 1, 14-26-5e, rigged.

GUADALUPE COUNTY—N. M. Prod. & Ref. Co., McMillan 1, 24-5n-16e, dr bel 4338 ft.

HARDING COUNTY—Carbon Dioxide Corporation, Tinsley 1, 31-21n-31, location.

LEA COUNTY—Baker Oil Co., Inc., sw nw 15-13s-33e, location.

LUNA COUNTY—Angelus O&M Co., State 3, se 30-21-10, try to reset casing 6171 ft.

RIO ARRIBA COUNTY—Governador Oil Co.'s 1, se 15-29n-7w, set casing 2070 ft.

ROOSEVELT COUNTY—Peterson Oil Co., Good 1, se ne 32-5s-30e, rig up.

SAN MIGUEL COUNTY—Cabra Springs O&G Co., Thompson 1, ne 21-12-22, changing to steam power, td 2540 ft.

WYOMING

CARBON COUNTY—Prairie O&G Co., 1, 29-37-89, plugging back to Frontier from 6165 ft, to test Frontier at 4900 ft. Midwest Refining Co., U. P. 27, 27-11-81, setting whipstock at 4011 ft.

CONVERSE COUNTY—John Ackard, se 24-33-72, sd temporarily to refinance.

FREMONT COUNTY—Ward O&G Co., 28-34-90, dr 2000 ft. Yellowstone Oil Co., Gabus 1, sw 14-38b-94w, dr below 1600 ft.

LINCOLN COUNTY—H. C. Harris et al, se 14-21n-117w, dr below 1550 ft.

NATRONA COUNTY—Mutual Oil Synd., Midway 2, sw se 14-36-79, ready to dr in 5353 ft.

SHERIDAN COUNTY—R. & D. Oil Co., nw se 21-57-97w, sd around 1450 ft.

SWEETWATER COUNTY—Vermillion Oil Co., sw sw 16-12-99w, resuming 4685 ft.

UINTA COUNTY—Transwestern Pete Co., Ltd., (Doheny) 6-14n-118, resuming 3216 ft. Park City O&G Co., ne nw 16-15n-113w, dr 2950 ft.

WASHAKIE COUNTY—Bales Oil Trust, Brome 1, ne nw 31-48n-90w, run 8¼ inch to bottom 1105 ft.

WESTON COUNTY—Julius Peters et al, Weitzell 1, sw nw 30-46-64, dr below 4070 ft. Gose Synd., ne 28-37n-63w, ur to lower 6¼-in, td 5050 ft. LeFaivre Oil Synd., nw se 29-45n-68w, to resume soon, td 1800 ft. Dearing Oil Co., ne nw 6-46n-63w, rig up.

SOUTHEASTERN STATES

Alabama Test Well Will Be Carried Deeper. Jackson's Record of No Serious Accidents Ended.

More Drill Stem Ordered For Alabama Joint Test

Jackson, Ala.—Definite assurance that Tidal Oil Company, Danciger Oil & Refining Company and Ramsey Petroleum Company's Everett and Boykin 1, NE SE Section 33-6n-2e, Clarke County, Alabama, on the Jackson Fault, will be deepened from 3523 feet in Tuscaloosa, was given during the past week when orders were placed for additional drill pipe. Original contract depth was 3500 feet.

Jackson Gas Field Has First Serious Well Fire

Jackson, Miss.—The first fatality for the Jackson gas field occurred June 9 when Atkisson and Dyer's Valentour 1, Section 18-5-2e, Rankin County, a recently completed east extension to the Jackson field caught fire, fatally burning four men. The victims were Laurie and Wayland Atkisson, part owners of the well, J. W. McCarroll, driller, and Bill Taylor.

The men were attempting to repack the master gates, it was reported, and in an effort to shut off some of the leaks about the Christmas tree, a spark was caused in a reported using of cold chisel and hammer with all the gates open, including the four-inch valves.

The well was still burning several days afterward.

The well was spudded June 6, 1931, but was not brought in until last April 3. Leaking connections prevented the United Gas Public Service Company hooking into the well, and officials recommended killing the well, due to the large amount of gas that was constantly coming from under the derrick floor. Several experts have given it as their opinion that the well will not crater. Boilers were moved in soon after the well caught fire to aid in snuffing out the blaze.

Southeastern States Field Developments

Wildcat Drilling Report

(Wells shut down not included)

MISSISSIPPI

CLARKE COUNTY (Quitman Dist.)—F. X. Gowans, Elfring 1, se ne 13-1n-14e, wo cas, td 104 ft.

HINDS COUNTY — Miss.-Minn. Oil Co., Edwards Land Co. 1, sw ne 23-6n-4w, sd 3100 ft (Wilcox).

LAMAR COUNTY (Purvis Dist.)—Stauffer & Kouri, Trs., Bond 1, se ne 18-2n-14w, show of gas, arr bail 1152 ft.

LOWNDES COUNTY — Lowndes County O&G Co., Carr Est. 1, ne nw 34-17-16, base Seima chalk 620 ft, dr 1350 ft, Tuscaloosa.

JASPER COUNTY—Bay Springs Pet. Co., Inc., Keyes 1, nw ne 21-2n-10e, dr 3500 ft, Wilcox.

MONROE COUNTY—P. J. McAlpine et al, Chas. Rye 1, se nw 22-15s-17w, sp dr 200 ft.

Building Economy---

True Building Economy lies not in the purchase price, but in the many years of thoroughly satisfactory service you can get from buildings built to your specific requirements. Such are the types offered you by Houston Ready-Cut House Company.

Cottages
Bunk Houses
Field Offices
Meter Houses
Valve Houses
Out Houses
Mess Halls
Warehouses
Garages
Filling Stations
Summer Cottages
Large Residences

HOUSTON READY-CUT HOUSE CO.

Successors to **CRAIN READY-CUT HOUSE CO.**

HOUSTON, TEXAS

SCOTT COUNTY—Culley et al, Owen 1, se ne 2-8n-9e, dr 650 ft gummy shale.

STONE COUNTY—Hercules Sulphur Expl. Co., Lang 2, sw sw 28-3s-11w, sand 1971-92 ft, setting 6⅝ cas, td 1992 ft.

ALABAMA

CLARKE COUNTY (Jackson)—Tidal Oil Co. et al, Everett & Boykin 1, ne se 33-6n-2e, elev 65 ft, arr to deepen, td 3523 ft (Tuscaloosa sand).

LAMAR COUNTY—McAlpine et al, Gardner 1, nw nw 22-15s-16w, 8¼ cas 1600 ft, dr 1860 ft, sandy shale (cable tools).

MOBILE COUNTY—Ohio Oil Co., Bethel 1, nw sw ne 34-3s-2w, dk and move in rig.

William M. Barret, Inc.

Consulting Geophysicists

Specializing in Magnetic Surveys

Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.

GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

THE FORT WORTH LABORATORIES

Field Gas Testing. Analysis of oil field brines, gas minerals and oil.

Sell Thermometers, Hydrometers and Laboratory Glassware.

F. B. Porter, B. S., Ch. E., Pres.
R. H. Fash, B. S., Vice-President
828½ Monroe St., Ft. Worth, Tex.

PATENTS

Patents Obtained and Trade Marks and Copyrights Registered

HARDWAY & CATHEY

428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

PATENTS

JESSE R. STONE
and **LESTER B. CLARK**

Patents, Infringement Litigation, Trade Marks
Associated with
Andrews, Streetman, Logue & Mobley
2200 Gulf Bldg. Houston, Texas
Capitol 7245

HIRSCH, BROWN AND SUSMAN

Attorneys at Law

32nd Floor Gulf Building
Houston, Texas

Specializing in Oil Law and Land Law

HOTEL LENOX

140 North St., near Delaware

BUFFALO, N. Y.

Right in the Center of Things

3 minutes from Peace Bridge, 5 minutes from Shopping, Theatre and Business District, 20 miles from Niagara Falls.

Large, homelike rooms and the best food in town. Rates, Single $2 to $3.50; Double $3 to $6. Family Suites $6 up.

FREE—*Excellent Official AAA Road Maps.*

Write CLARENCE A. MINER, *Pres.*

WASHINGTON COUNTY—South Ala. O. & G. Co., St. Stephens A-1, 26-7n-1w, dk.

TENNESSEE

CHESTER COUNTY—Gilmore et al, Scott 1, top Eutaw 1045 ft, 8-inch cas 1195 ft, dr 1477 ft, gray chert.

Blocking 30,000 Acres for South Alabama Drill Test

Jackson, Ala.—R. L. Kennon of Montgomery, Alabama, and J. E. Brantley, a New York geologist, are assembling a 30,000-acre block in Wilcox County, south Alabama, the consideration, it is reported, being the drilling of an early test. The acreage is on the Lower Peachtree Anticline.

EASTERN STATES

Eastern States Field Developments

Completions

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
Sloan-Zook Producing Co., Fee 24..	17	....
25, 26, 27, 30 Fee.....	Pres.	....
28 Fee	20	....
Fee, 29	22	....
Forest Petroleum Corp., Fee 83....	2	....
Fee 84	2	....
Fee 85	2	....
Fee 86	2	....
Fee 87, 88, 89, 90, 91, 92, 93....pres.		....
South Penn Oil Co., Burdick 9....	2	....
Melvin 300	3	....
Forest Oil Corp. Fee 103	2	....
J. W. Looker, Willets 33.....	4	....
Rew Oil Co., Bingham 38 tr. 67....	3	....
Bradford Producing Inc. Artley 7..pres.		....
Mitchell 9	3	....
Mix Creek Oil Co., Fee 58.....pres.		....
Chief Producing Co., Rasey 7.....pres.		....
Olean Petroleum Co. Fee 19.....	17	....
Bovaird & Reed, Quintruple 8.....	2	....
Minard Run Oil Co., Cram 13, 14..pres.		....
F. J. Eisert, Hamlin 4.....	12	....
Lincoln & Brink, Fee 51.....	2	....
L. G. Dana, Dana 5.....	2	....
CLARION-VENANGO—		
Anderson & Rice, Stull 8.....	2	....
J. B. Smithman, Fee 155	2	....
J. H. Wingard, Black 5.....	2	....
CENTER-MIDDLE FIELD—		
A. M. Lilly & Co., Middaugh 6.....	3	....
BUTLER COUNTY—		
Pyle, Marshall & Co., Ripper 16...	2	....
TIOGA-WAYNE FIELD—		
Penn United Gas Co., Fletcher 1..	¶4	....
Allegany Gas Co., Smith 1.....¶2½		....
Lycoming Natural Gas Co., Wheeler 1	*	5597

NEW YORK

ALLEGANY COUNTY—		
B. B. Oil Co., Fee 1.....	6	....
N. V. V. Franchot, Fee 5.....	35	....
C. M. Lippert & Co., Lippert 18...	4	....
L. A. Eastman & Co., Ames 12....	3	....
Forest Oil Corp., Fee 75.....	2	....
Fee 76	2	....
Fee 77	2	....
Gibson, Merry & Co., Fee 5.....	3	....
Arthur F. Blanchard, Fee 7.....	3	....

WEST VIRGINIA

CALHOUN COUNTY—		
Creed Barker & Co., Huffman 1...	¶¼	2249
GILMER COUNTY—		
A. E. Ellis & Co., Ayres 1.....	¶¼	1812
LINCOLN COUNTY—		
Turtle Lick Gas Co., Fee 1.....	¶¼	2282
MINGO COUNTY—		
Virginian Gasoline Co., Costerman 23	12	1184
SOUTHEASTERN OHIO		
WASHINGTON COUNTY—		
Sam Brendall & Co., Cordrey 18...	3	1827
Murphy Farm Oil & Gas Co., Murphy 2	*	1682
CENTRAL OHIO		
CUYAHOGA COUNTY—		
Ohio Fuel Gas Co., Talish 1.....¶1¼		....
GUERNSEY COUNTY—		
Ohio Fuel Gas Co., Martin 1.....	¶¼	3411
MEDINA COUNTY—		
Edson & Co., Shaw 24.....	5	308
Curtis & Eakeb, Brown 6.....	*	400
PERRY COUNTY—		
Allegheny Oil Co., Longstreth 19..	2	1153
Mid East Gas Co., Snider 1.....	5	3080
STARK COUNTY—		
F. A. Brendall & Co., Young 1....¶4½		4427
VINTON COUNTY—		
Cooperative Oil Co. & Co. Nelson 1	2	....
NORTHWESTERN OHIO		
ALLEN COUNTY—		
C.A.&F.J. Peavy, Lewis 15.....	10	....
INDIANA		
GIBSON COUNTY—		
Big Four Oil & Gas Co., Nora Hope 1	175	....
Wabash Public Service Co., Allen 3	¶4	....
PIKE COUNTY—		
Chas. L. Divers No. 3 and others, Robling 4	55	....
ILLINOIS		
CRAWFORD COUNTY—		
W. C. McBride, Inc., Oldham 1....	20	958
KENTUCKY		
McLEAN COUNTY—		
Maple & Lyle, Unknown 1.....	*	....
Fred Weir & Co., Himes 1.....	*	....
Hupp & Duff, Johnson 1.....	*	....
First Owensboro Bank & Trust, Sommers 3	*	1464
MUHLENBERG COUNTY—		
Ellis & Young, Lee 1	15	....
Corneal 1	*	1360
OHIO COUNTY—		
D. J. White & Co., Bickett 4.....	25	....
Bolling & Hume, Christian 1.....	150	335
MICHIGAN		
MIDLAND COUNTY—		
Pure Oil Co., Bernard A-2.....	800	....
Columbia Oil & Gas Co., Hill & Co. 1	350	....

ARKANSAS FIELDS

Arkansas Field Developments

Wildcat Drilling Report

(Wells shut down not included)

HOT SPRINGS COUNTY—Starr Oil Co., Cunningham 1, 11-5-16, sr, td 1340 ft.

LITTLE RIVER COUNTY—Harrell et al, Taffee 1, sw nw 25-12s-32w, dk.

MILLER COUNTY—Fitzwater et al, E. L. Beck 1, sw se 35-15-26, top red beds 2812 ft, wo cas, td 2920 ft, shale. Noel et al, Dickson 1, 11-20-27, fsh 2600 ft.

OUACHITA COUNTY—Copenhaver et al, Berg 1, 13-15-17, wosr 2208 ft.

ST. FRANCIS COUNTY—Field & Jones, F. M. White 1, 1-4-2e, dr 2210 ft hd shale. E. R. Henderson, Britton 1, ne nw 1-4-1e, lcn.

SCOTT COUNTY — Heavener O&G Co., Reser 1, 36-4-26, fsh 1436 ft.

WASHINGTON COUNTY—Chase & Rogers, Cunningham 1, sw ne 14-15n-32, lcn.

New Equipment for the Field

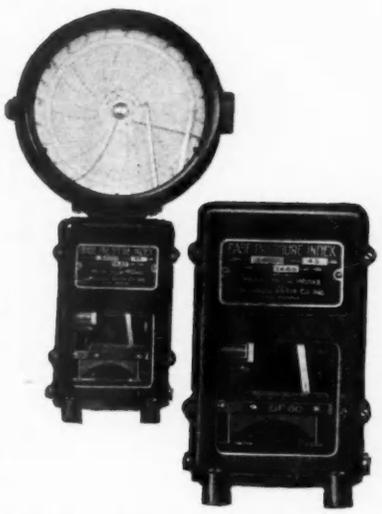
MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

1. Base Pressure Index

AMERICAN METER COMPANY

American Meter Company, 105 West 40 Street, New York, announces a base pressure index, an instrument which is designed to tell at a glance the exact quantity of gas at standard or base pressure that has passed through a displacement meter regardless of vaviations in pipe line measure.



Left, base pressure index with volume and pressure gauge. Right, base pressure index.

The base pressure index automatically multiplies the quantity of gas passing through the meter, at pipe line conditions, by the product of the line pressure divided by the base pressure and registers the resultant on a straight reading index, according to the manufacturer.

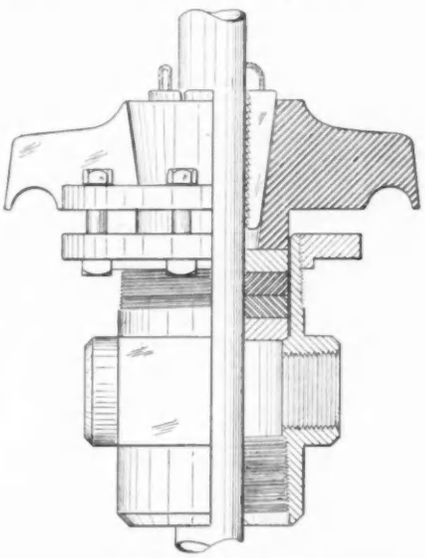
2. Tubing Head

OIL CENTER TOOL COMPANY

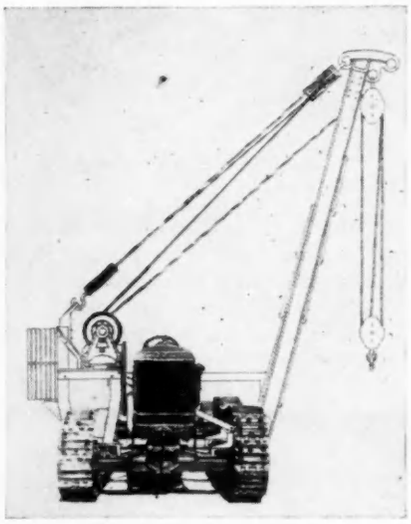
Oil Center Tool Company, Inc., 924 Adele Street, Houston, Texas, announces a new Type E tubing head designed to be drilled through, and to permit use of a blowout preventer while the well is being drilled.

When tubing is being run, a special flange is screwed on to the head. The cast steel bowl bolts to this flange, insuring a tight seal-off, and uniform pressure on the packing. Should well kick or blow while tubing is being run in, it may quickly be controlled by raising bowl up, placing split packing rings around tubing, throwing slips in bowl, and setting down with the tubing.

After tubing has been set, it can be raised or lowered, under pressure, the full distance of one length of tubing between the collars.



O C T Tubing Head



Tractor Pipe Line Boom

3. Pipe Line Boom

TRACTOR TRUCK EQUIPMENT COMPANY

Tractor Truck Equipment Company, Tulsa, Oklahoma, has developed a new pipe line boom for use with Trackson full-crawler wheels.

To be used with or without stiff leg, the boom has a lifting capacity of 48,000 pounds with stiff leg and the power take-off has two speeds forward and one reverse. It has been designed especially for McCormick-Deering tractor in oil field and other industrial uses. It is equipped with double-drum winch for loading and unloading independent of each other, the pulling for both load drum and boom drum.
for both load drum and boom drum.

— — — — — — ***MAIL COUPON*** — — — — — —

THE OIL WEEKLY,
Houston, Texas, U. S. A.

Please see that I am supplied, without obligation, additional information on New Equipment Items Nos. ———— described in the June 20, 1932, issue of THE OIL WEEKLY.

Name .....

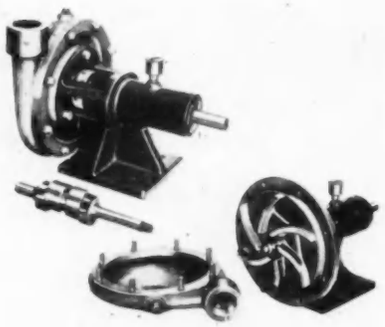
Company .....

Address .....

4. Centrifugal Pumps

HILLS-McCANNA COMPANY

Hills-McCanna Company, 2349 Nelson Street, Chicago, has developed a high efficiency, ball bearing, centrifugal pump in which the shaft and impeller alignment is accomplished by providing ball bearings to carry the load in any direction, reducing friction and permitting close tolerance in fitting the impeller in the housing.

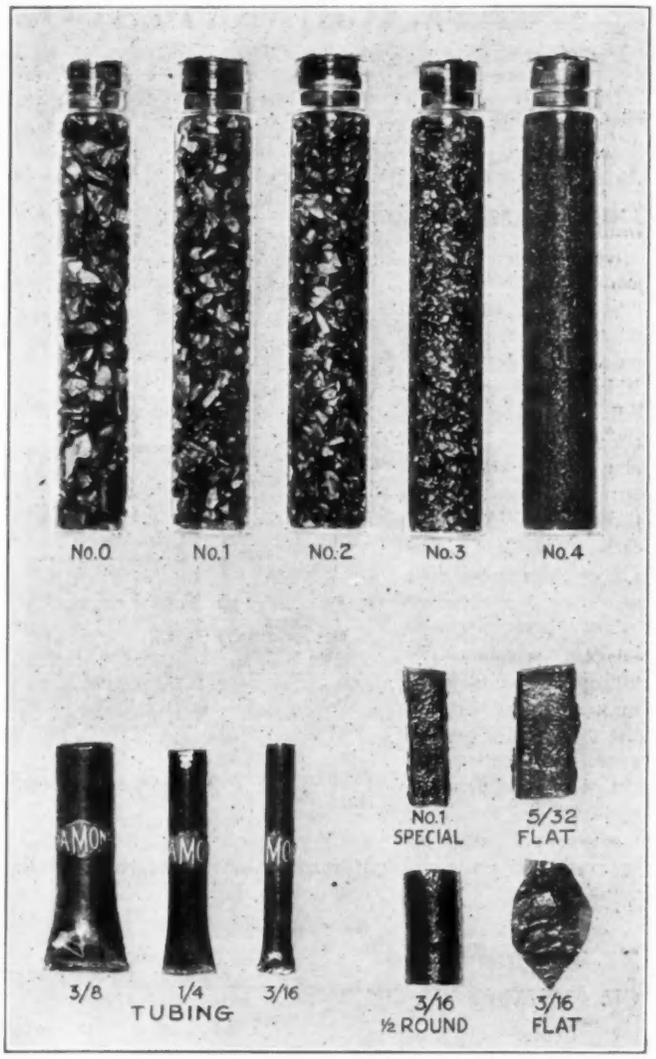


New Hills-McCanna Pump

The stuffing box is of split-screw, gland type, designed in such a manner that there is no bearing in back of the packing, a feature calculated to prevent contamination of the liquid handled by the pump lubricant. The pump has removable inboard and outboard heads, a desirable feature when handling highly corrosive fluids.

5. Surfacing Metal

DIAMOND METAL COMPANY



Diamond Metal Company, 3411 Harrisburg Boulevard, Houston, produces an alloy material used in surfacing drilling bits to increase the cutting ability of the edge.

According to the manufacturers, Diamond metal is made from 99.29 per cent pure tungsten and retains 92.5 per cent tungsten when finished. It is free from excessive carbon and foreign matter and will not break down under the heat of an acetylene torch, but is rapidly applied and flows evenly.

Fred E. Cooper Has New Show Room

Fred E. Cooper now is located in larger quarters at 211 South Lansing Street, Tulsa, Oklahoma. Mr. Cooper is special winch developer for the Allis-Chalmers Manufacturing Company, tractor division, and formerly had his offices at 18 South Madison, in Tulsa. With the merger of Allis-Chalmers and Advance-Rumely Mr. Cooper's territory is considerably broadened and his line of equipment also has been materially increased.

Marsh Valve Company Names Distributor

Marsh Valve Company, Dunkirk, New York, announces the appointment of Sarco Company, 183 Madison Avenue, New York, as distributors for New York district for the Marsh line of valves.

Squeaks *from the* BULL WHEEL

One of those fellows who are muscle-bound above the ears persistently refused to do what he was paying the professional to show him how to do. "You'll drive me out of my mind," complained the would-be golfer. "That wouldn't be a drive, that would be a putt," rejoined the pro.

"Children," said a teacher, "be diligent and steadfast, and you will succeed. Take the case of George Washington. Do you remember my telling you of the great difficulty George Washington had to contend with?"

"Yes, ma'am," said a little boy. "He couldn't tell a lie."

"One of my ancestors won a battle in the Crusades by his skill in handling the artillery," said the baron.

"But, my dear baron," said his friend, "at the time of the Crusades gunpowder had not been discovered."

"I know that as well as you do, and so did my ancestor."

"How did he win the battle then?"

"He brought the artillery to bear on the Saracens; and they, seeing the guns, supposed that powder had at last been invented, and fled in dismay."

He: "Dearest, I must tell you something, even though it may break your heart. This being with you on my vacation has been the most pleasant thing in my life and I really and truly love you, little one. But even if it kills me I must reveal something that I have heretofore concealed from you. I—I—am married."

She: "So am I."

He—I can't see why you should refuse to marry me because I asked for just one kiss!

She—Well, any modern fellow who would ask for a kiss isn't aggressive enough to make a good living.

"What kind of chicken is this?"

"Dat am th' bes' spring chicken, sah."

"I thought as much. Take it back to the steward. I've been chewing one of the springs for five minutes."

He: "What was the name of that last piece you played?"

She: "Silk Stockings."

He: "Gosh, it sure did have lots of runs."

Son: "Dad, I've decided to settle down and go into the chicken business."

Dad: "Better try owls. You're more familiar with their hours."

Mr. Richman: "How do you like the place? Shall we buy it?"

His Wife: "Oh, it's perfectly lovely! The view from this balcony is so fine that it leaves me speechless."

Mr. Richman: "Then we'll buy it."

Teacher—What are the races that have dominated England since the invasion of the Romans?

Small Boy—The Grand National and the Derby, miss.

A little city boy was visiting his country cousin.

"What do you know about cows?" quizzed the country lad. "You don't even know if that's a Jersey cow."

"I don't know from here, 'cause I can't see its license."

"Dearest, could you be happy in my walk of life?"

"What? Aren't you going to buy a car?"

"Hurrah! Five dollars for my latest story!"

"Congratulations, young man. From whom did you get the money?"

"From the express company. They lost it."

Bank Manager: "Excuse me, Mrs. Smith, but this cheque of your husband's appears to have been altered, and a nought added after the five."

Mrs. Smith: "Oh, you're going to side with him again, are you? It's disgusting the way you men stick together."

Teacher: "How many bones have you in your body?"

Willie: "Nine hundred."

Teacher: "That's a good many more than I have."

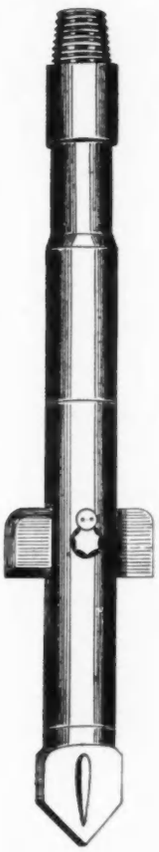
Willie: "Yeah, but I had sardines for lunch."

Sambo: "How fast can you all go in dat new car?"

Rastus: "Ah could make two miles a minute 'ceptin' for one thing."

Sambo: "What's dat, big boy?"

Rastus: "Only jes' cause de distance is too long for de shortness of de time."



You Too Can Find A New Way To Profits By Using The Baker "Wall Scraper".

There are many ways in which the new Baker Rotary Hydraulic Expansion Wall Scraper can reduce costs and increase production.

Costs can be greatly reduced by revising casing programs if the Baker Wall Scraper is used to produce the required clearances for one or more of the various strings of casing.

The Wall Scraper is particularly useful in bringing in and cleaning up the well and is opening the way to an entirely new and profitable procedure. Cleaning up the oil sands by scraping the mud, cement and other forms of coating makes it possible to bring in a well much more easily and in less time; reduces the possibilities of clogging the perforations in liners; and increases production.

Find out for yourself the profitable advantages that many operators have proved for themselves and for us. A detailed, illustrated booklet will be sent to you promptly for the asking.

SEE COMPOSITE CATALOG FOR DETAILS

BAKER OIL TOOLS, Inc.

HUNTINGTON PARK, CALIFORNIA

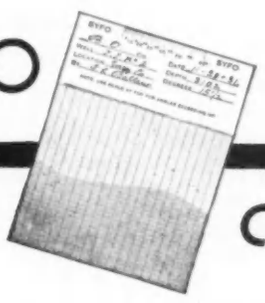
COALINGA HOUSTON TULSA NEW YORK

WHAT USERS SAY · No. 6

"Your service has to date been very satisfactory. We have no suggestions to make at this time which might result in an improvement"

SYFO

SAFE
SPEEDY
ACCURATE
INEXPENSIVE



Clinograph

SPERRY-SUN WELL SURVEYING COMPANY

1608 WALNUT STREET, PHILADELPHIA, PA.

DALLAS, TEXAS
1501 Caruth Street

TYLER, TEXAS
Bell Building
209 N. College Street

LOS ANGELES, CALIF.
415 Petroleum Securities Bldg.

TULSA, OKLA.
402 Petroleum Building

HOUSTON, TEXAS
1417 Esperson Bldg.

INDEX TO ADVERTISERS

Abercrombie Pump Company ..... Front Cover
American Association of Petroleum Geologists.....
American Brake Materials Corporation.....
American Cable Company 16
American Iron & Machine Works.....
American Sheet & Tin Plate Company.....
American Steel Wire Company.....
Athey Truss Wheel Company .....
Atlas Sales Corporation .....

Baker Hotels .....
Baker Oil Tools, Inc..... 61
Baroid Sales Co. .....
The Barrett Company .....
William M. Barrett, Inc. 58
The Bartlett Hayward Co. .....
Beebe Brothers .....
Bowen Air Lines 60
Bradford Motor Works .....
The Brewster Company 31
Byron Jackson Co. .....

Caterpillar Tractor Co. 4
Columbian Steel Tank Co. .....
The Continental Supply Co.....

D. & B. Pump & Supply Co. .....
Darling Valve & Manufacturing Co.....
E. M. Dart Manufacturing Co.....
The Dayton Rubber Manufacturing Co.....
De La Vergne Engine Co.....
Dewitt Hotels .....
Diamond Metal Co. .....
S. R. Dresser Manufacturing Co. .....

Economy Electric Lantern Co. .....
Emsco Derrick & Equipment Co. .....
Emsco Falk .....

Fort Worth Laboratories 58

Gaso Pump & Burner Manufacturing Co.....
General Electric Co. .....
H. P. Gott Manufacturing Co..... 54
The Guiberson Corp. 6
Gulf Publishing Company 23
Gulf States Utilities Co.....

R. B. Hall & Co. .....
Halliburton Oil Well Cementing Co.....
Hardway & Cathey 58
Harrisburg Pipe & Pipe Bending Co.....
Haynes Stellite Co. .....
Hazard Wire Rope Co.....
C. M. Meeter Sons & Co.....
Hirsch, Brown & Susman 58
The Charles N. Hough Manufacturing Co.....
Hughes Tool Co. ..... Fourth Cover
Humble Oil & Refining Co. .....
Houston Ready-Cut House Co..... 57
International-Stacey Corp. .....
The International Nickel Co.....

Byron Jackson Co. .....
Jarecki Manufacturing Co. .....
Jensen Bros. Manufacturing Co.....
The S. M. Jones Company.....
Jones & Laughlin Steel Corp.....

Larkin Packer Co..... 43
Hotel Lennox 58
Layne & Bowler Company.....

J. H. McEvoy & Co..... 41
Maloney Tank Manufacturing Co.....
Merchant Photo Service .....
Lee C. Moore & Co. .....

The National Supply Co. .....
National Tube Co. .....
Norvell-Wilder Supply Co. .....

Oil Center Tool Co.....
Oil Well Supply Co. .....

The Parkersburg Rig & Reel Co.....
Petroleum Equipment Co. .....
Petroleum Rectifying Co. .....
Piccadilly Hotel .....
Pittsburgh Steel Co. ..... Second Cover
Price-Trawick, Inc. .....

Reading Iron Company .....
Reed Roller Bit Co. .....
Republic Rubber Co. 3
Republic Steel Corp. .....
The Ruberoid Co. .....

South Chester Tube Co. .....
Southern Pacific Lines .....
Sprang Chalfant & Co. .....
Sperry-Sun Well Surveying Co..... 62
Jesse R. Stone and Lester B. Clark..... 58

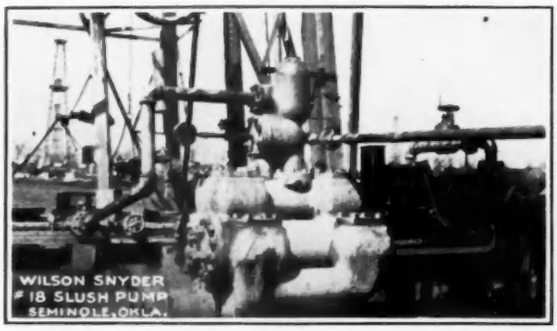
Texas Electric Service Co.....
Thermoid Rubber Co. .....
Tretolite Co. .....
Trimont Manufacturing Co. .....

Union Wire Rope Corp.....

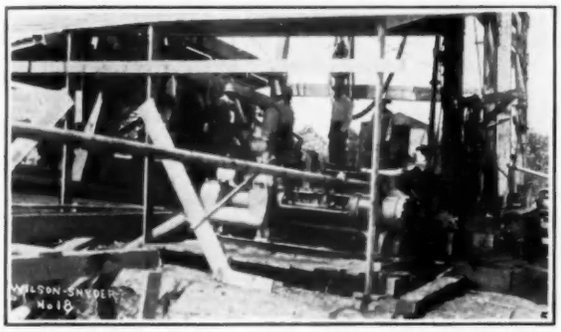
Waukesha Motor Co. .....
Wickwire-Spencer Steel Company .....
Williamsport Wire Rope Co. .....
Wilson Supply Co. ..... Third Cover

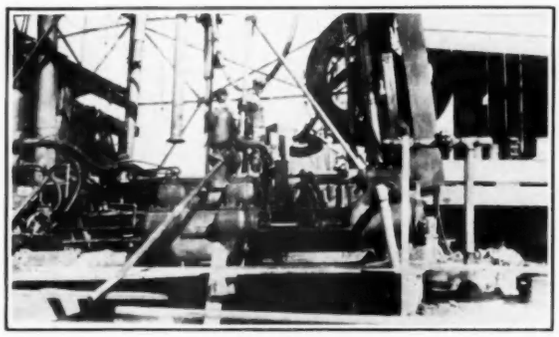
Youngstown Sheet & Tube Co.....

Wilson-Snyder Slush Pumps



do a usual job in a most unusual WAY





To their great satisfaction many hundreds of users have learned these facts about Wilson-Snyder Slush Pumps:

1. **ECONOMY.** The almost complete absence of repairs knocks a tremendous item out of drilling cost.

2. **STAMINA.** Long life and continuous operation are the result of more than 50 years experience in pump manufacturing.

3. **SPEED.** Side suction and larger valves allow quicker filling and more rapid distribution of fluid to valves.

4. **POWER.** Fluid ends are tested to 3000 pounds working pressure. Long stroke increases quantity and pressure of slush delivered.

5. **SERVICE.** Scientifically designed and sturdily constructed, Wilson-Snyders drill well after well without undue attention or pampering.

WILSON SUPPLY COMPANY

OIL and GAS WELL SUPPLIES

1412 MAURY STREET — HOUSTON, TEXAS

Branches at

Beaumont, Luling, Pettus, Barbers Hill, Kilgore, Joinerville, Gladewater, Texas; and Shreveport, Louisiana

PLAYING SAFE AT CONROE

with

HUGHES VALVES and HUGHES (BROWN) TUBING HEAD

The above photograph shows the Heep Oil Corporation's Cartwright No. 1 at Conroe. This was the second completed well in the new Conroe field.

Pressure was 1950 lbs.

The well is equipped with a 7-inch Hughes (Brown) Safety Tubing Head, which allows full operation of master gate after well has been tubed.

Other Hughes equipment consists of:—

1 Hughes, 5000 lb. test, Drilling Valve.
4 Hughes, 4 inch, 5000 lb. test, Manifold Valves.
5 Hughes, 3 inch, 5000 lb. test, Manifold Valves.
2 Hughes, 3 inch, Adjustable Chokes.
4 Hughes, 2 inch, 2000 lb. test, Manifold Valves.

Herman Heep, president of the Heep Oil Corporation, is familiar with the many oil field hazards and believes in "playing safe" by using equipment which he knows will give him the maximum service even under the most extreme conditions.

Sold by
Supply Stores
Everywhere

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.
Midland, Texas

Main Office and Plant
HOUSTON,
TEXAS

Export Offices
19 Rector Street,
New York City